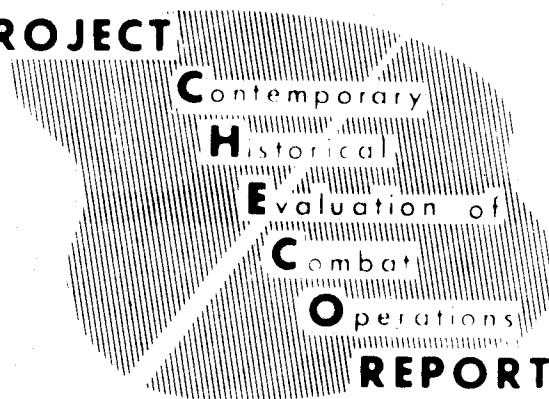


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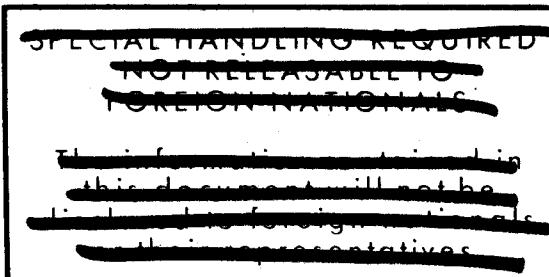
THE USAF
HELICOPTER
IN SEA

4 DECEMBER 1968

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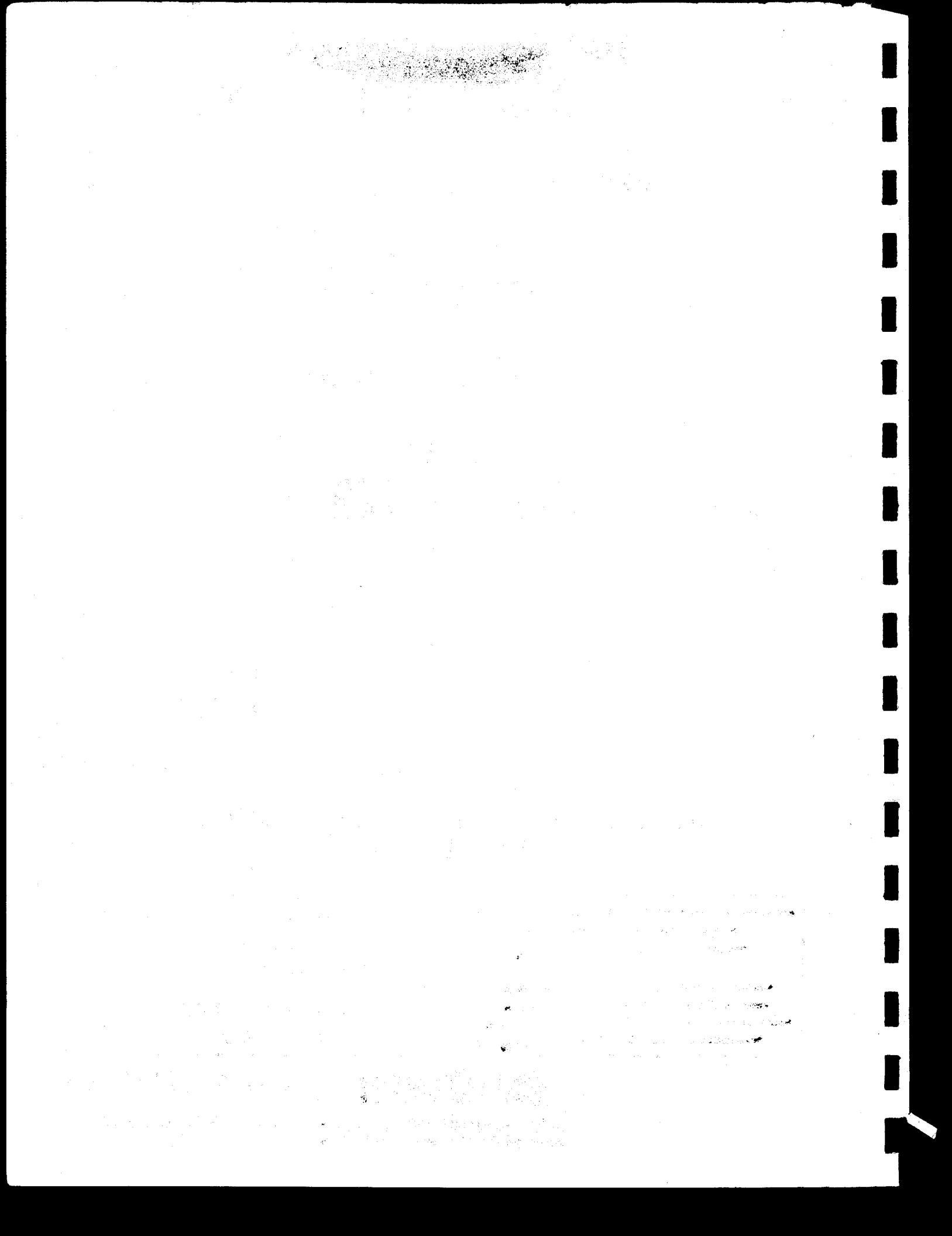
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SAC(DXI) 1Cy (92) 56SOW 1Cy (136)
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SAC(OA) 1Cy (94) 355TFW 1Cy (138)
USAFA(DFH) 1Cy (95) 366TFW 1Cy (139)
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FOREWORD

This report surveys the role of the USAF helicopter in Southeast Asia from 1961 to 1968. The main objective is to show how the USAF employed its helicopters in Southeast Asia (SEA), ranging from Search and Rescue missions to airlift support for highly classified Special Operations of 7th Air Force and MACV. Attention is directed to the types of helicopters used, and the units which employed Air Force helicopters to support their missions.

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INTRODUCTION

The USAF helicopter really became of age during the years 1964-1968 while proving itself capable of performing numerous types of specialized missions for MACV and 7AF in the campaign against the enemy. The importance of the overall impact that these missions have had on the total conflict in SEA cannot be over-emphasized.

One important factor which was instrumental in the USAF helicopter's assumption of a larger role in SEA was the recognition by key Air Force personnel that rotary wing aircraft had the capability and versatility required to accomplish an expanding variety of specialized missions. Since the cease-fire in Korea and as recently as 1966, the Air Force used its helicopter force primarily for search and rescue, air taxi and light cargo missions. As higher performance helicopters entered the Air Force inventory and the complexity and tactical requirements of the air war in SEA increased, the missions assigned to USAF helicopter units were greatly expanded.

This report investigates the expanding role assigned to the USAF helicopter in SEA. Special attention is given to the Air Force units charged with the responsibility of accomplishing these roles and how each utilized its particular type helicopter in support of the air war in SEA. The contents of this report are necessarily limited due to security restrictions.

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CHAPTER I

USAF HELICOPTER EMPLOYMENT IN SEA

Background

In 1964, the United States was committed to a war in Southeast Asia that would, from all indications, be a long, drawn out affair. Still, at this early stage in the Vietnam conflict, U.S. military forces were restricted by national policy to an advisory role.^{1/} U.S. military resources were deployed to SEA accordingly, and any change in the nature of their employment required approval from the highest level.

The war had an unfamiliar focus: the delicate task of waging a counterinsurgency effort. This effort placed a low priority on military means and a high priority on civic action and propaganda as the tools for a final victory.^{2/} It was out of this restricted background that the mission of the USAF in Southeast Asia, as we know it today, emerged. As the Communist insurgency movements increased in SEA, USAF began to take a second look at its posture in that area. It soon began a steady operational buildup in Thailand whose position was vital to the free nations of Asia. Tactical air bases were established throughout Thailand, with personnel and equipment necessary to wage a full scale air war.

Further indication of the proportionate growth of the air war between 1964 and 1966 was the establishment of the 2nd Air Division in South Vietnam as a numbered Air Force. The organization became the 7th Air Force, gaining a direct line to Hq PACAF, instead of the intermediary 13AF at Clark Air

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Base in the Philippines. In spite of the growth of the air arm between 1964 and 1966, the USAF still operated under a heavy restriction. The Geneva Treaty a decade earlier had prohibited the use of jet engines, ^{3/} as well as restricting other aircraft types from USAF utilization. Stringent rules of engagement placed additional limitations on the employment of USAF resources.

Even though many restrictions on air operations in Southeast Asia were being lifted, the JCS still adhered to a number of limitations. In May 1964, United States policy still held that the U.S. military in Vietnam would not participate in combat. An exception was made in the case of FARM GATE aircraft. They could be used to fly bonafide operational training missions against hostile targets in order to prepare Vietnamese Air Force (VNAF) personnel to eventually take over from the USAF. Further, policy held that helicopters were to be used only for transport reasons, and that any weapons on board would be used solely to protect the passengers ^{4/} and the vehicle itself.

At this stage, the USAF directed its efforts toward assisting the VNAF in developing a professionally trained and well-equipped helicopter force. In June 1964, a field training detachment of the Air Training Command arrived at Tan Son Nhut Air Base from Stead AFB, Nevada to begin ^{5/} training the VNAF.

The buildup of the USAF helicopter force in SEA prior to 1964 was of necessity limited by force requirements that held higher priority. The greater emphasis on tactical air forces was a direct result of the nature

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of the conflict which was developing throughout Asia, and first priority was placed on enhancing the tactical strike capability. The development and advancement of a rotary wing fleet was necessarily subordinated to increases in tactical forces during this period.

6/

The greatest impact of limited helicopter resources in SEA was felt by those agencies which depended upon the helicopter to perform their prime mission. One such agency was the Air Rescue Service, now the Aerospace Rescue and Recovery Service (ARRS). Falling under the guidance of the Military Airlift Command (at the time the Military Air Transport Service), ARRS had the responsibility for Air-Sea rescue of downed crewmen, but as of June 1964, the Air Force did not have a rescue unit assigned for duty in Southeast Asia. Records indicate that an effort was made to establish such a unit in the early months of 1963, but these actions were to no avail. The 1964 history of the 2nd Air Division revealed that from 1 January 1962 to 1 July 1964, as many as 143 casualties had resulted from crashes of U.S. aircraft in Vietnam. Further, personnel of the Pacific Air Rescue Center, now Pacific Aerospace Rescue and Recovery Center, felt that these and future fatalities would be greatly reduced if the Air Force had an established rescue unit in Southeast Asia.

7/

At the time, the USAF had to rely upon the Army, the Marines, and VNAF to rescue its downed aircrews. Unfortunately, some of these rescue crews were not professionally trained in rescue procedures. An ARRS capability in SEA was obviously needed.

8/

During the Korean conflict, Air Rescue Service had more than 12,000 personnel. After the war subsided, the rescue forces were reduced by

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almost 75 percent, to a force consisting of 1,465 men and only 66 aircraft.

This decrease was due, in part, to the changing international situation in the Far East with a number of USAF units shifting location from Korea to Japan. The decreasing amount of air travel in the Far East theater after the Korean War also prompted Hq USAF to decrease the Air Rescue Service facilities.
9/

Coupled with the decision at Hq USAF to reduce and deactivate several Air Rescue units was the withdrawal of the wartime mission clause from Air Rescue activities. This created a technological void in personnel recovery systems which, in turn, led to a lack of support and a position of low priority for the Rescue Service and the USAF helicopter. The failure to keep pace with the buildup of tactical forces within the USAF placed the Air Rescue Service in an unfortunate position. When the tactical buildup in SEA began in 1964, personnel involved with helicopter operations were faced with a big job and not enough equipment to do the task.
10/

As the tactical air arm continued its buildup in SEA during 1964, the incident and accident rate involving aircrews increased. The need for a larger helicopter force to conduct search and rescue operations became urgent. Only after several individual letters and one major study, conducted by the Chief of Det 3, Pacific Air Rescue Service, were forwarded through channels for Air Staff review, was any positive action taken to bolster the strength and capabilities of the air rescue forces.

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It was evident that the Air Force needed to take positive action--not only towards establishing an Air Rescue capability in SEA, but also towards placing the USAF helicopter in a new perspective. The USAF had been depending upon other services and VNAF forces to rescue its own downed crewmen. Progress, then, for the USAF helicopter in SEA before 1964 was slow.

Recognition of the broad potential of the USAF helicopter to assume an expanded role in SEA air operations gradually began to emerge. Air Rescue Service was the first to recognize the urgent need for a strong, well-equipped and versatile helicopter force. However, as the tempo of the war increased, the USAF found itself committed to the continuous expansion of air operations. With this expansion, additional missions for airpower developed, and the USAF helicopter began to assume some of the responsibility for airlift imposed upon the 2nd Air Division.

As the war increased in Southeast Asia during the years 1964-1968, the need for the USAF helicopter increased accordingly. The Search and Rescue mission became valuable in rescuing downed crewmen over the Gulf of Tonkin and over the jungles of North Vietnam. The tempo of the Communist insurgent movements within Thailand increased and with this increase developed a need for the use of USAF rotary wing airlift support for USAF Special Operations. Each of these missions will be fully discussed in subsequent chapters.

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Current Posture

By 1968, the USAF had considerably refined its helicopter capability in SEA. Helicopter forces were deployed to several locations throughout South Vietnam and Thailand, and were performing a variety of vital tasks in support of both tactical air and ground operations. (Fig. 1.)

Air Force units employed five different types of helicopters in Southeast Asia. These helicopters had proved their value in providing a rotary wing airlift capability to support USAF and U.S. sponsored agency missions--some highly publicized and some highly classified.

HH-3E

The HH-3E model was used as the primary vehicle in Aerospace Rescue and Recovery operations in Southeast Asia. Called the "Jolly Green Giant", the HH-3E, capable of being refueled in-flight by the HC-130P "Crown" aircraft, logged an impressive number of hours while rescuing downed aircrews from the Gulf of Tonkin and the rough terrain of North and South Vietnam. The HH-3E helicopters were located at two units in SEA: the 37th ARRS (Aerospace Rescue and Recovery Squadron) at Da Nang AB, Vietnam and 40th ARRS, Detachment 1, Nakhon Phanom RTAFB. (Fig. 2.)

CH-3

The CH-3 model was used to support USAF Special Operations activities out of Thailand. Primarily utilized to provide airlift capability for the Pony Express flights of the 20th Helicopter Squadron at Udorn RTAFB, the CH-3 helicopters were involved in many highly classified

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21st Helicopter Squadron, CH-3
40th ARRS, Det 1 (HH-3)

37th ARRS (Jolly Greens)
HH-3

20th Helicopter Squadron,
Headquarters (UH-1F)

20th Helicopter Squadron
Flights A, B, C (CH-3)
Flight G (UH-1F)
40th ARRS (HH-53)

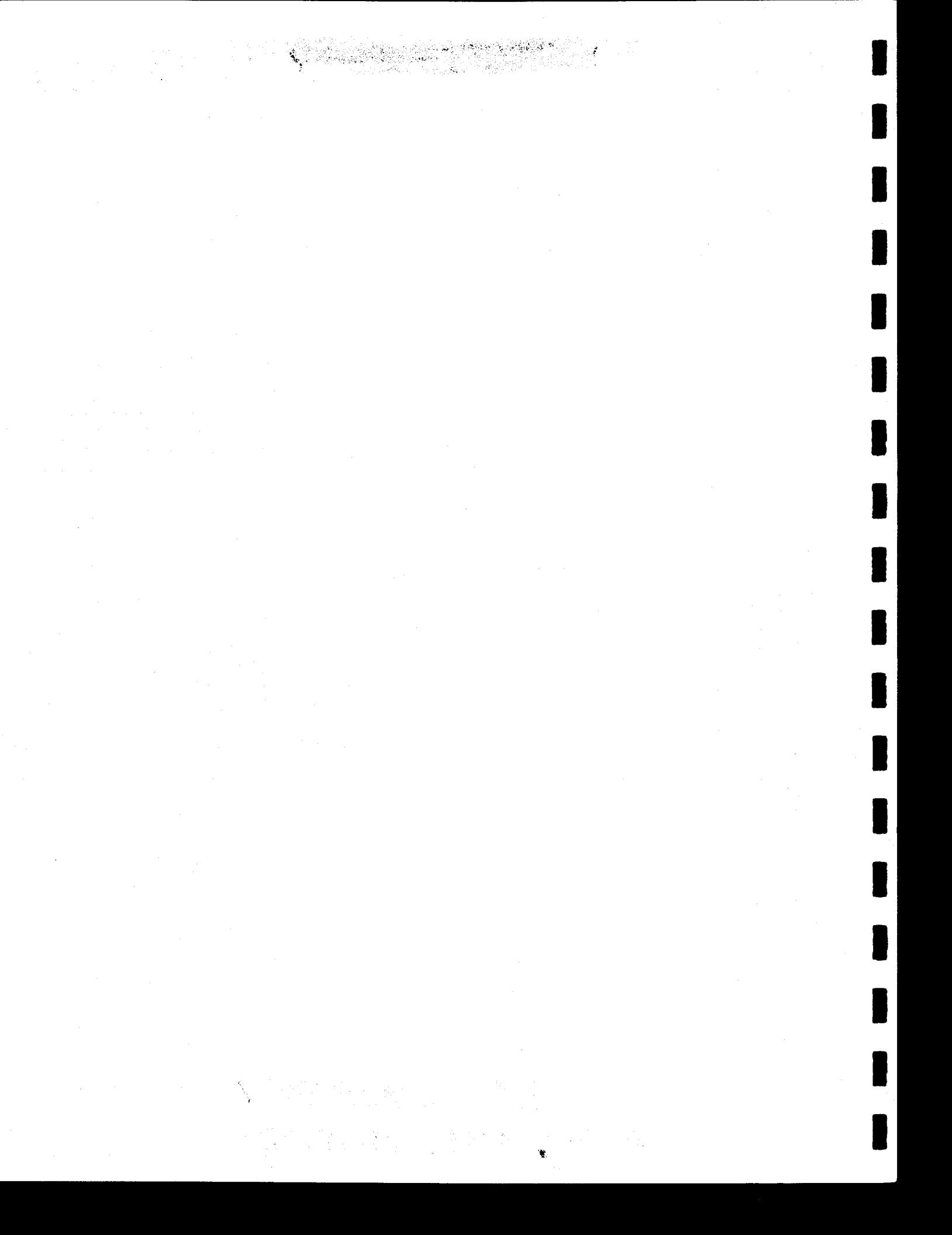
38th ARRS Detachments (HH-43B/F)

Det 1	Phan Rang AB, RVN
Det 2	Takhli RTAFB, Thailand
Det 3	Ubon RTAFB, Thailand
Det 4	Korat RTAFB, Thailand
Det 5	Udorn RTAFB, Thailand
Det 6	Bien Hoa AB, RVN
Det 7	Da Nang AB, RVN
Det 8	Cam Ranh Bay AB, RVN
Det 9	Pleiku AB, RVN
Det 10	Binh Thuy AB, RVN
Det 11	Tuy Hoa AB, RVN
Det 12	Nha Trang AB, RVN
Det 13	Phu Cat AB, RVN
Det 14	Tan Son Nhut AB, RVN

3rd Aerospace Rescue and Recovery Group
(Headquarters)
JSARC
38th Aerospace Rescue and Recovery Squadron
(Headquarters)

FIGURE 1

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operations. The CH-3 helicopters were also used in support of the mission of the 21st Helicopter Squadron located at Nakhon Phanom RTAFB. Here the DUST DEVILS were utilized to support the prime mission of Task Force Alpha, a top priority Air Force project designed to establish an electronic barrier for detecting paths of enemy infiltration routes into Vietnam through Laos.

(Fig. 3)

HH-43B/F

HH-43 helicopters were used at 14 different locations throughout Vietnam and Thailand for Local Base Rescue (LBR). Falling under the direct control of the 38th ARRS, headquarters at Tan Son Nhut AB, the HH-43 "Pedros" were positioned at bases which launched tactical air strikes.

The Pedros provided local base and area rescue service and were used for fire suppression when necessary. (Fig. 4.)

HH-53B

The HH-53B helicopter was an advanced version of the HH-3 Jolly Green Giant helicopter. Capable of longer ranges, the HH-53B provided for a higher lift capability and was able to hover and refuel at higher altitudes than the HH-3. In addition, it had an advanced single engine capability. All of the HH-53B Jolly Green Giant helicopters employed by USAF in SEA were based out of Udorn RTAFB. Because of its increased flight capabilities, it was appropriately referred to as the "Super Jolly Green Giant."

(Fig. 5)

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UH-1F

The UH-1F helicopter provided the 20th Helicopter Squadron, located at Nha Trang AB, Vietnam, with a helilift capability necessary for the operations performed by the 14th Air Commando Wing. Operations for the "Green Hornets" of the 20th HS were staged out of Nha Trang AB and the FOL (Forward Operating Location) at Ban Me Thuot. The UH-1F Huey Gunships performed highly classified missions for the 14th Air Commando Wing and the 20th HS was the only counterinsurgency helicopter squadron in the USAF.

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HH-3E
FIGURE 2

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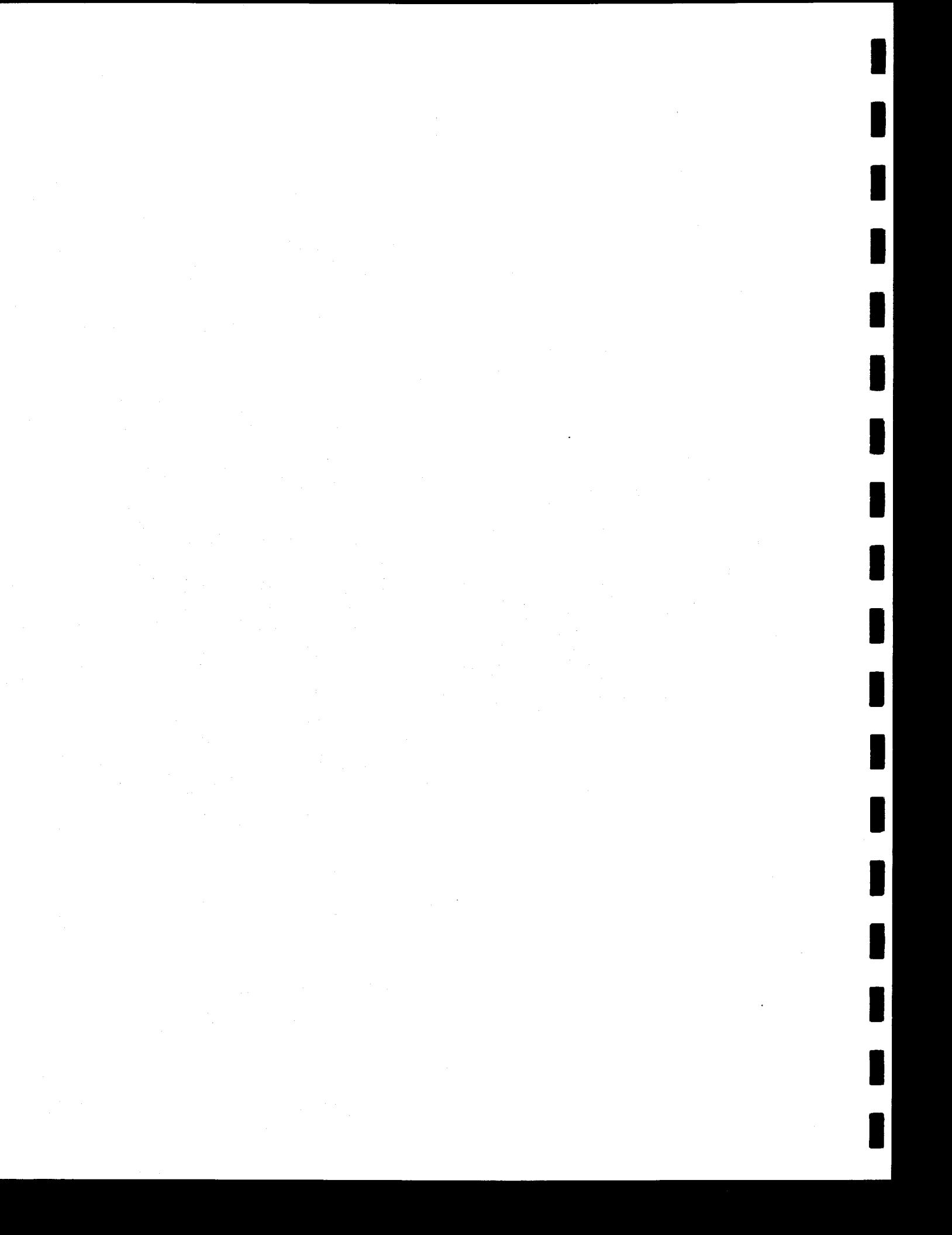


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USAF CH-3C Used for Confiscation
of Viet Cong Rice Supply
FIGURE 3

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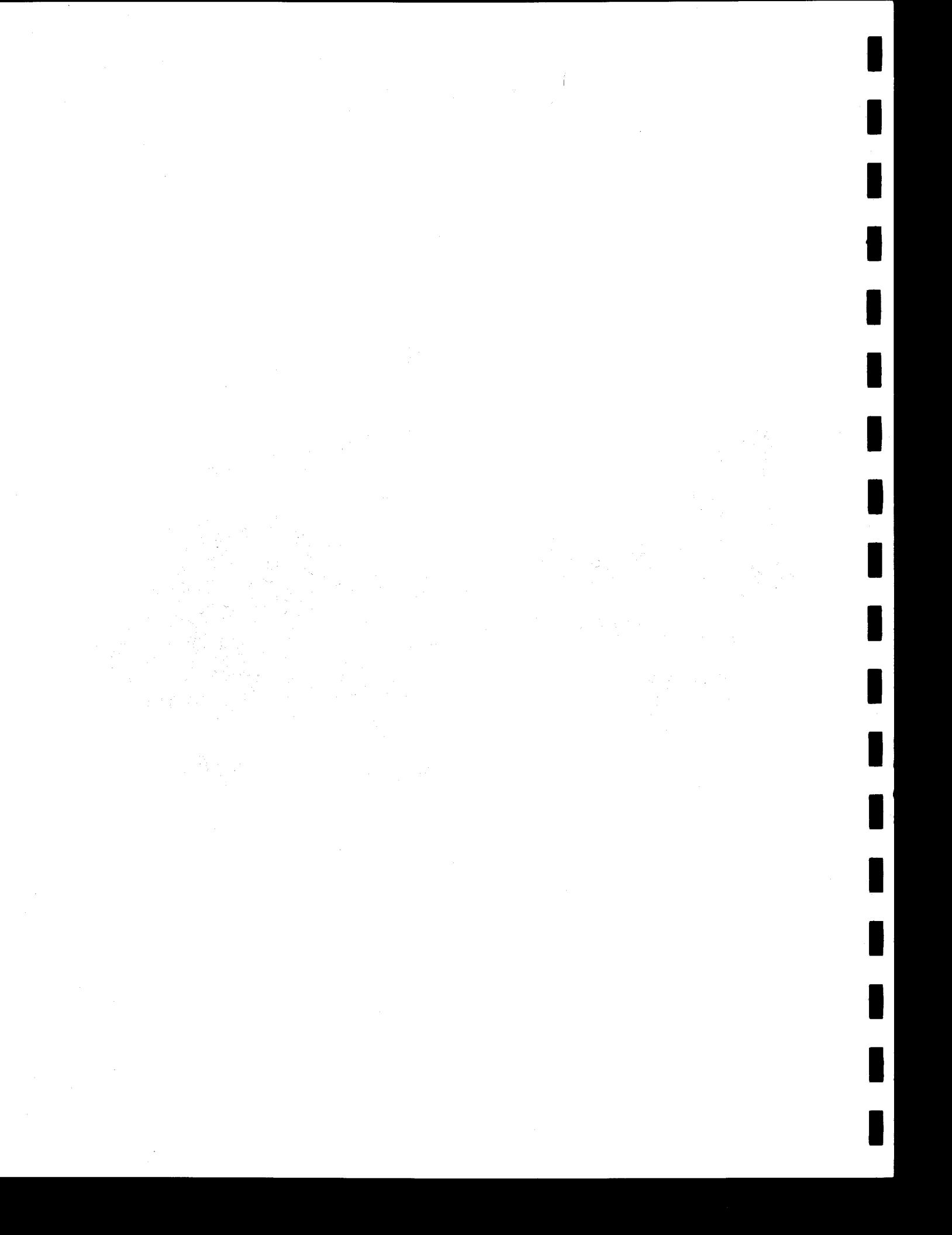


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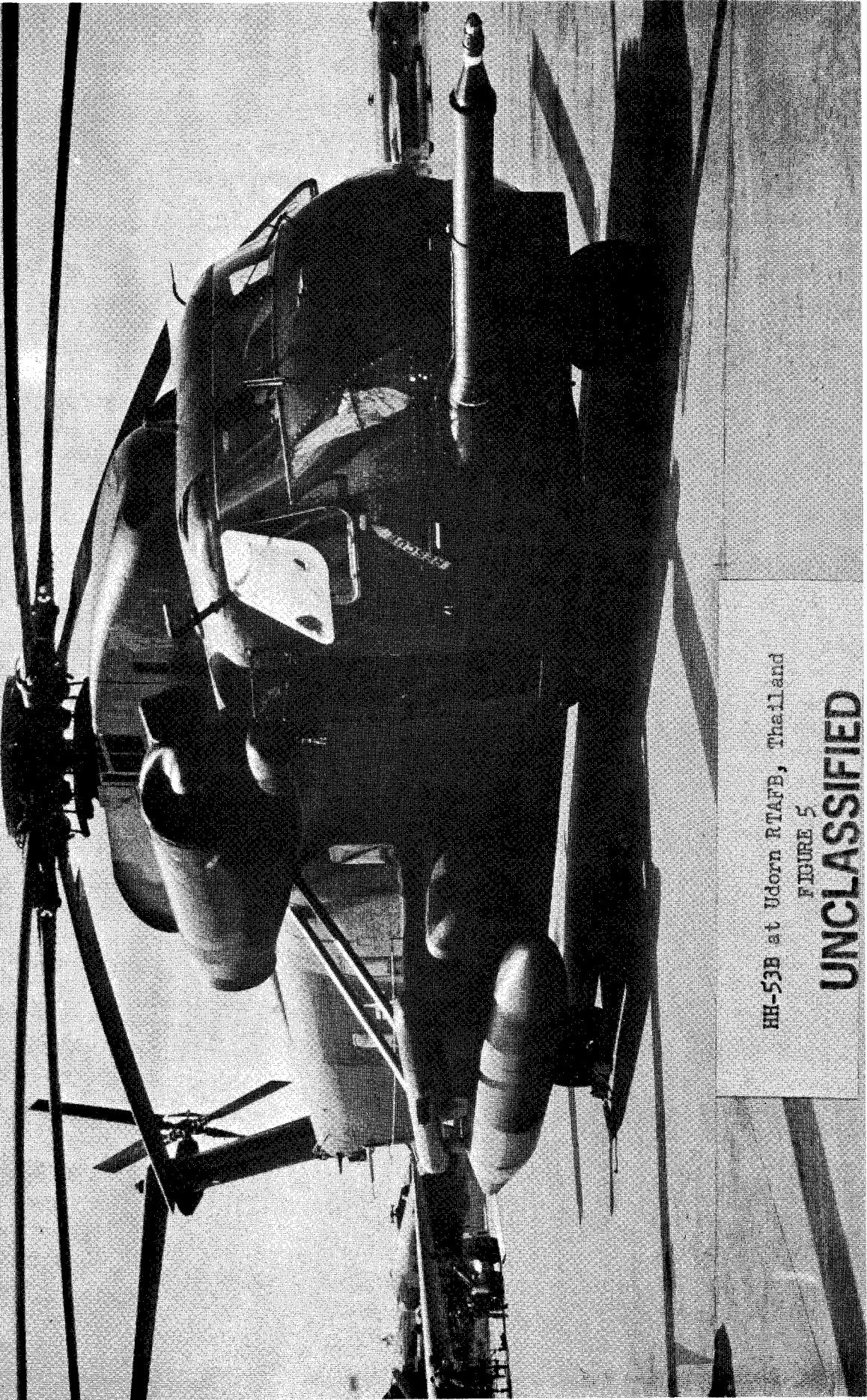


HH-43
FIGURE 4

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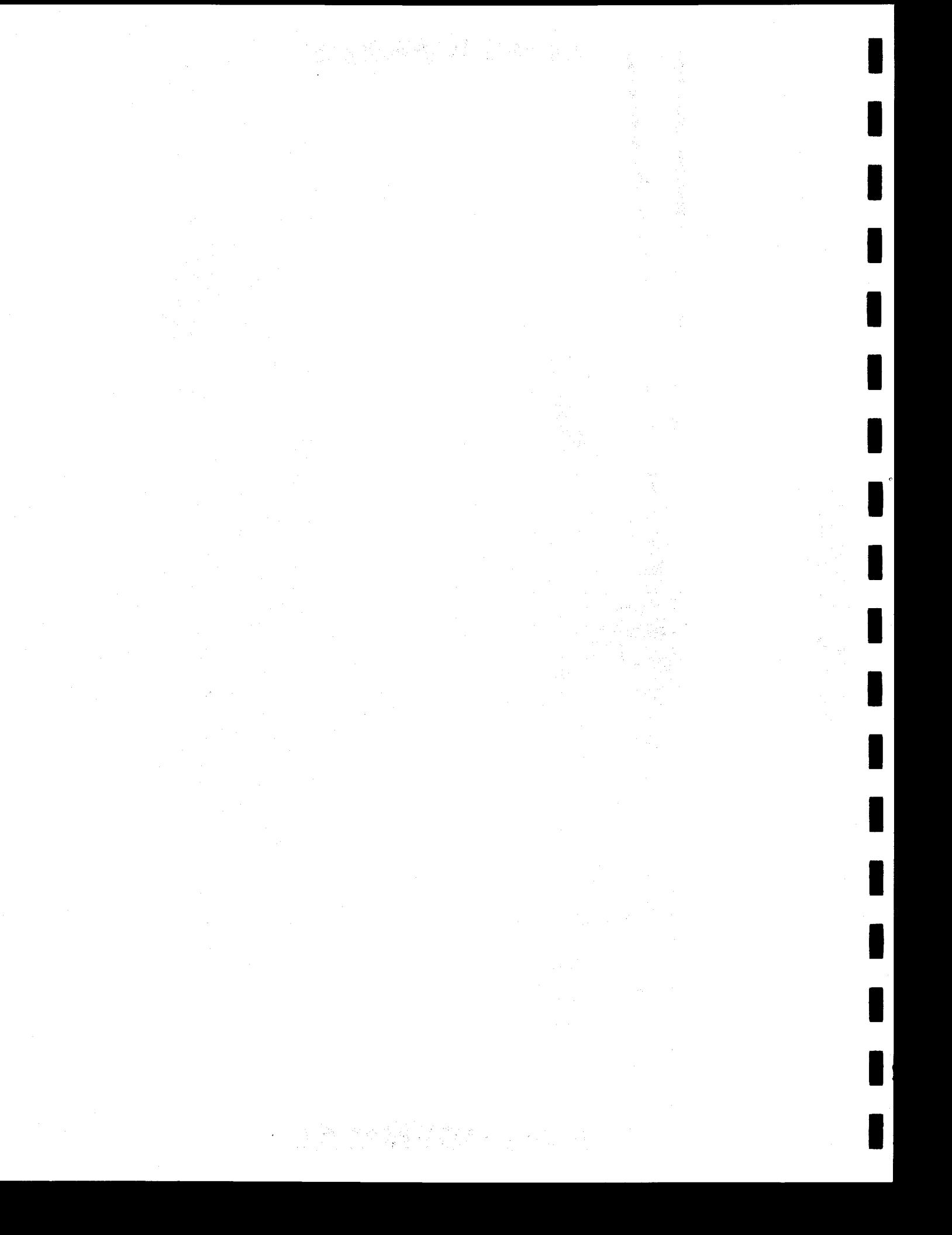
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HH-53B at Udorn RTAFB, Thailand

FIGURE 5

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CHAPTER II

SEARCH AND RESCUE HELICOPTERS

All search and rescue operations in Southeast Asia were under the control of the 3rd Aerospace Rescue and Recovery Group (ARRGp) headquartered at Tan Son Nhut AB. This organization had prime responsibility of providing a rescue and recovery capability for aircrews throughout SEA, an area covering 1.1 million square miles, 700,000 sq miles of which are jungle territory. A secondary mission was to provide a Local Base Rescue (LBR) capability at bases which used tactical fighter aircraft in both Thailand and Vietnam. The 3rd ARRGp exercised control over several rescue units operating in Southeast Asia, including the Joint Search and Rescue Center (JSARC) located at Tan Son Nhut AB. The JSARC is the central coordinating agency for all search and rescue efforts within the 7AF area of operations.
1/
Those units which the 3rd ARRGp controlled included:

37th ARRS - Located at DaNang AB with 14 HH-3E Jolly Green helicopters.

38th ARRS - Located at Tan Son Nhut AB with 32 HH-43B/F helicopters for LBR at 14 detachments throughout SEA.

39th ARRS - Located at Tuy Hoa AB with 11 HC-130P Crown aircraft for airborne mission control and refueling capability for helicopters (10 acft located at Tuy Hoa AB, 1 at Udorn RTAFB).

40th ARRS - Located at Udorn RTAFB with 6 HH-53 Jolly Green Giant Helicopters.

40th ARRS - Located at Nakhon Phanom RTAFB with 8 HH-3C Det 1 Jolly Green helicopters.

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The 3rd ARRGp was activated at Tan Son Nhut on 8 January 1966, but only after two years of frustrated and determined effort to establish an air rescue capability in Southeast Asia.^{2/} As stated previously, there was no USAF rescue capability in Vietnam as of 1 July 1964. Initially, the 2nd Air Division had requested four rescue units to provide extensive coverage of the SEA theater. In May 1964, CINCPAC approved the establishment of a USAF rescue capability.^{3/} On 20 October 1964, with the activation of a TDY detachment, consisting of 3 H-43B helicopters at DaNang, and three at Bien Hoa, the USAF had its first professional rescue unit in SEA.^{4/}

The original TDY unit had been active at DaNang since August 1964. Once the unit at Bien Hoa AB became completely operational on 5 November 1964, the original 3 HH-43Bs were shifted to Nakhon Phanom RTAFB to supplement the already established rescue unit. The first USAF Air-Sea rescue capability to be assigned to Thailand was established at Nakhon Phanom on 19 June 1964. Originally consisting of 2 HH-43B helicopters and 36 personnel, this unit acted as a built-up force against early Communist insurgency operations and as a forerunner for an air rescue service based in Thailand.^{5/}

The familiar name, Jolly Green Giant, was given to the two versions of the air rescue helicopters used by the units of the 3rd ARRGp. The use of the HH-3E Jolly Green helicopters was successful, but because of altitude and weight limitations, the need for a more versatile and capable helicopter was evident. The following figures compare the HH-3E and the HH-53B aircraft

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to perform the air-sea rescue work in SEA.

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HH-3E

500 nm
11-120 kts
140 kts
5 (2 pilots, 2 PJs,
1 FE)
750 rds

RANGE UNREFUELED
SPEED
CRUISE DASH
CREW
ARMAMENT

HH-53B

625nm
130-150 kts
170 kts
5 (2 pilots, 2 PJs, 1 FE)
3,000 rds

The HH-53 proved itself mission after mission over Laos and North Vietnam. Pilots themselves have indicated its effectiveness because it can hover and refuel at higher altitudes than the HH-3, up to 10,000 feet, ^{6/} as opposed to 5,000 feet. ^{6/} The first group of HH-53s arrived in Southeast Asia in September 1967, and from then through June 1968, the Jolly Greens ^{7/} from Udorn RTAFB made 82 pick ups, 66 north of the 17th parallel. ^{7/}

The concept of air-to-air refueling for USAF helicopters was new to the aviation world. (Fig. 7.) The need for aerial refueling of helicopters arose in 1964 when HH-3 helicopters were first used for rescue operations. The range capability required for out-country rescues could be met only by utilization of aerial refueling techniques. In 1966, a CH-3C helicopter, equipped with a dummy fuel probe, made practice dry hook-ups in formation with a USMC KC-130 in North Carolina. This experiment gave USAF the impetus for developing a capacity which provided for in-flight refueling for ARRS helicopters.

The USAF utilized the HH-43B/F helicopter to perform LBR operations throughout SEA. The helicopters were controlled by the 38th ARRS at Tan

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Son Nhut AB, and operated from 14 different bases which utilized tactical fighter aircraft. Detachments were located as shown in Figure 1.

Operations of the 37th ARRS at Da Nang provide a good example of the utilization of USAF helicopters in the rescue program. The 37th ARRS became an active squadron on 18 July 1966.^{8/} Its mission was to operate and maintain a Search and Rescue (SAR) capability for downed crewmen. Operations were directed by the 3rd ARRGp at Tan Son Nhut and OL-1 (Operating Location No. 1) located at Monkey Mountain, north of Da Nang AB.

Gulf of Tonkin rescue operations were provided by the 37th ARRS with the HH-3E helicopters beginning in August 1967 when the HU-16B amphibian was phased out of the active inventory. Adequate coverage around the DMZ was provided by two HH-3Es with a dawn to dusk strip alert at Quang Tri and one backup HH-3E at Da Nang. Operations over the Gulf were escorted by USN A-1 aircraft and when the Gulf orbit mission was assigned to the HH-3E^{9/} (August 1967), the helicopters were refueled by the HC-130P Crown aircraft.

During 1967, the 37th ARRS made 34 percent of all combat rescues made by ARRS helicopters in SEA. Throughout 1967, there was a total of 411 combat saves in SEA--HH-43 Pedros were credited with 215, Det 1, 37ARRS-NKP was credited with 56, and the 37ARRS at Da Nang credited with 140.^{10/} The list of awards and decorations earned by the members of the 37th ARRS was impressive. Sgt. Duane Hackney, a former Pararescueman with the 37th ARRS became the first living enlisted man in Air Force history to earn the Air

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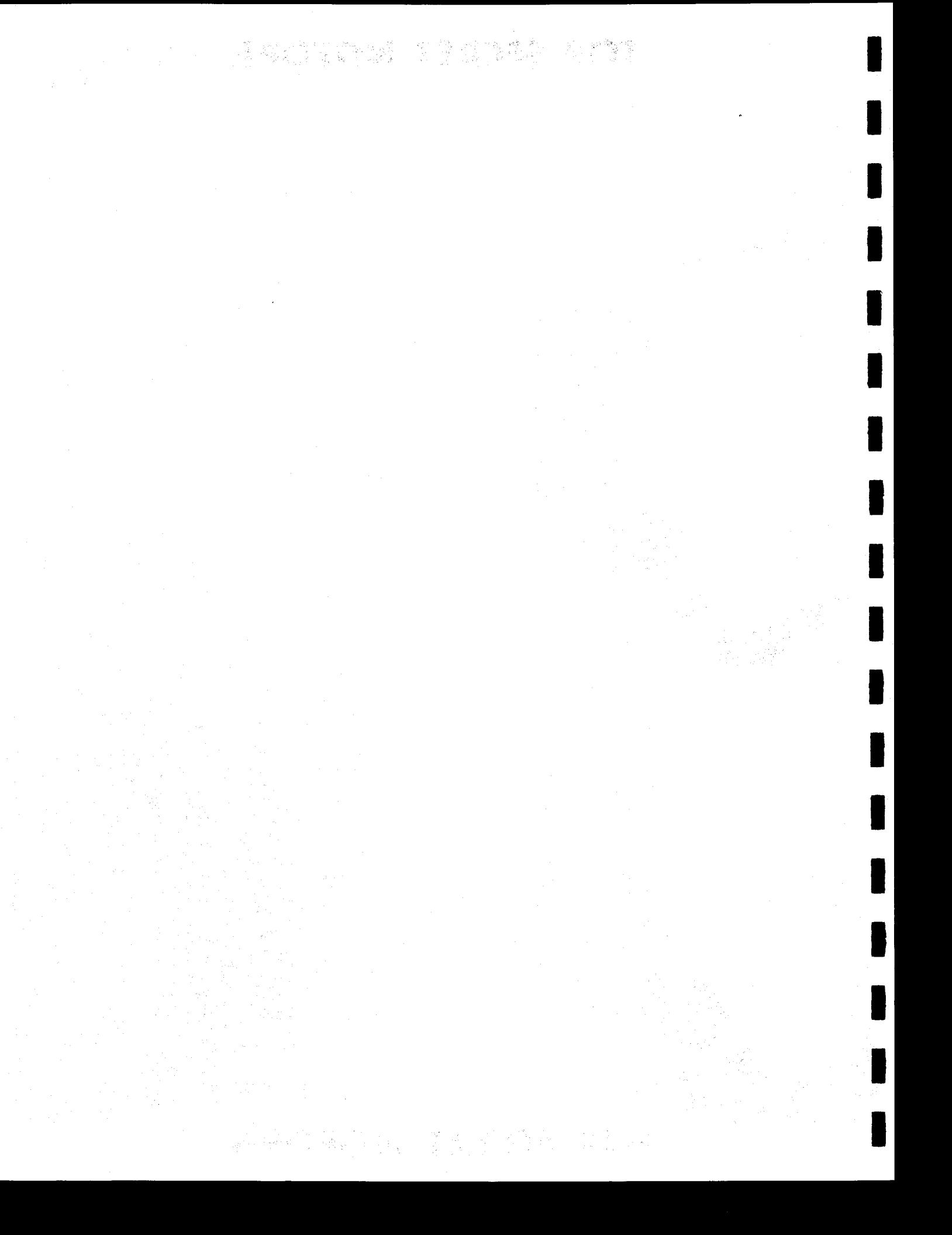
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HH-3 Conducts Rescue with Jungle Penetrator

FIGURE 6

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Force Cross. The significance of the USAF helicopter in the air rescue missions was viewed through the job of the PJs (Pararescuemen). Their difficult job depended upon the flexibility and performance capabilities of the USAF helicopter in rescue operations.

Air America provided support for the rescue of downed crewmen in Laos prior to 1968. As the air war over Laos intensified in 1965, Air America did not have the resources to make a full commitment to SAR activities. Political restrictions were placed upon Air America aircraft crossing the borders of Laos, and the USAF was forced to develop its own rescue capability in Laos, as well as in the RVN. Air America continued to assist USAF SAR functions in Laos by furnishing forward operating sites, intelligence data and weather information.

11/
USAF began using a FOL for rescue purposes and utilized strip alert procedures to reduce the time/distance factor in recovering downed aircrews. Lima Site 36 and Lima Site 98 in Laos, and Quang Tri, in the RVN were utilized effectively by the Jolly Greens, and provided a "rescue-ready" capability for USAF. Statistics proved that if a rescue helicopter can reach a downed airman within 15 minutes, the chances for survival and rescue are fairly good. This was the significance of using the FOL as an aid to improved rescue techniques.

12/
The USAF helicopter provided the rescue capability to return downed airmen to their respective jobs. Secretary of the Air Force, Harold Brown, put it best when he stated that when the history of the war is written,

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the story of the USAF helicopter will become one of the most outstanding
human dramas in the history of the USAF.^{13/}

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HH-3 and HC-130P Demonstrate Helicopter
Refueling Capability
FIGURE 7

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CHAPTER III

USAF SPECIAL OPERATIONS: PART I

Other than the Search and Rescue mission in Southeast Asia, the USAF helicopter was active and valuable in the field of USAF Special Operations. The three-year period, from 1965 to 1968, witnessed a sizable increase in these activities--due directly to the increasing Communist threats in Thailand and due additionally to the commitments of the USAF to U.S. sponsored operations. It was during this period that the USAF helicopter was given new roles in SEA.

Background for USAF Helicopter Operations in Thailand

The growing threat of Communist insurgent movements in Thailand by early 1966 prompted U.S. military and political leaders to revise their thinking about American military commitments throughout Southeast Asia. The growing threat of Communist insurgency in Thailand would soon be of major concern to the U.S. and its position in Asia.

U.S. military participation in Thailand during 1964-1965 was nominal. Permission was granted by the Thai Government to USAF to develop air bases in several locations throughout Thailand. By the end of 1966, the USAF launched airstrikes into NVN and Laos, but not into SVN, from seven Royal ^{1/} Thai Air Force Bases. With U.S. strike forces operating out of Thailand, the Thais became targets for an accelerated Communist insurgency timetable. Increased Communist activity prompted additional U.S. assistance, in a supporting and advisory role, to aid the already established Thai COIN operations.

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A definite requirement existed for teaching the Royal Thai Air Force (RTAF) to support its own COIN efforts. Part of the incapability of the RTAF at this point was due directly to the position of the military in Thai society. While the Royal Thai Army forces enjoyed a relatively high position--one of military and political significance--the RTAF assumed a second place role, preventing it from effectively supporting COIN operations. This, then, was the background for the USAF involvement in setting up, in an advisory capacity, Special Operations training under the guidance of the 606th Air Commando Squadron (ACS) at Nakhon Phanom RTAFB in Northern Thailand. This also opened the door for the active role that the USAF helicopter would play in Special Operations activities in support of U.S. efforts in Southeast Asia.

The Buildup

The first opportunity for the USAF to use its helicopters in support of Special Operations in Thailand arose in late 1965. As the Communist insurgent threat continued to grow throughout Northern Thailand in late 1965 and early 1966, and as the air mission in SEA took on a role of greater importance, the USAF Advisory Group in Thailand concentrated its effort on improving the status of the RTAF. The Advisory Group wanted the USAF to set up training programs for the RTAF in order that the Thais might increase their own capability to demonstrate a strong air arm to support growing COIN operations. Of particular interest was the concern for an expanded helicopter airlift capability.^{2/} The USAF, then, had an excellent opportunity to demonstrate its capabilities to establish a training program for the RTAF.

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Helicopter training for the RTAF students began in January 1966 at Don Muang AB. Ten of these students came directly to Don Muang AB after completing their primary flight training at Korat RTAFB. With the increase in COIN activities by mid-1966, the Air Force sent an H34 Mobile Training Team (MTT) to Thailand by late June to establish a more comprehensive training program for the RTAF.^{3/} Between July 1966 and January 1967, the target date for the completion of RTAF COIN training, the USAF invaluabley assisted the Thais in establishing an adequate helicopter training program of their own.

Operation Lucky Tiger

The program to establish a training unit at Nakhon Phanom RTAFB, under the 606th Air Commando Squadron, was nicknamed "LUCKY TIGER." In addition to other operations tasks, the 606th ACS was responsible for providing rotary wing training for the RTAF. The decision to deploy USAF helicopters to Thailand was not without political and military incident. The controversy arose when the U.S. Military Assistance Command, Thailand (MACTHAI) felt very strongly that the U.S. Army, and not the USAF, should be given the responsibility for providing interim training for the RTAF. After a series of high level discussions in Washington, the USAF and its helicopters were given the job of training the Thais in COIN operations.^{4/}

The decision to allow the USAF, and not the Army, to move helicopters into Thailand reflected a political consideration as well. All U.S. operations out of Thailand were conducted, at this time, under a strict guise of secrecy, and there was a reasonable amount of concern for too

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large a buildup at once within Thailand. The U.S. Ambassador was very much aware of this problem, and after conferring with the Commander, United States Military Assistance Command, Vietnam (COMUSMACV), who believed that a rotary lift capability was essential for Thai Special Operations, urged prompt action on the part of the U.S. Government.

Royal Thai Government officials indicated that the "most critical single deficiency" their military forces faced in providing a strong defense against the increased buildup of insurgent forces within Thailand was an effective rotary airlift capability. Because of the rough terrain of Northern Thailand, air support became the key to successful operations. The air support that proved to be the most effective was a helilift capability.
6/ This, then, gave the 606th ACS a basis for its deployment to Thailand.

Nakhon Phanom RTAFB became the early base of operation for the 606th ACS, which deployed MTTs to certain RTAF bases to provide training. Background discussions on the use of USAF helicopters to support Thai COIN operations reflected a top level concern for active and urgent U.S. military support for "Lucky Tiger". At a meeting held on 2 March 1966 with CINCRAC, COMUSMACV, and the 7AF Commander, the deployment of 4 UH-1F helicopters to the 606th ACS at Nakhon Phanom was discussed. CINCPAC further advised that an additional 24 UH-1F helicopters would be needed to sufficiently carry out Special Operations activities in Thailand.
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CINCPACAF, on 9 April 1966, in a message to USAIRA (United States Air Attaché) in Bangkok, reflected the view of CSAF, and quoted a message from the latter which discussed the augmentation of "Lucky Tiger" helicopter operations:

8/

"A critical requirement exists in Thailand to provide rotary wing mobility for their COIN forces with USAF helicopters. The JCS has approved augmentation of the activating 606th ACS with 21 additional UH-1F helicopters...Secretary of Defense approval to implement this program is expected shortly. Deployment readiness date for 21 UH-1Fs and aircrew support personnel established as 40 days after Secretary of Defense approval. Highest Air Staff approvals were obtained prior to JCS consideration. It should be recognized that the JCS decision on this helicopter augmentation with the 606th ACS presents the USAF with a unique opportunity to demonstrate its ability to operate rotary wing aircraft in the USAF SAW force."

This message reflected very clearly the priority and importance in using the USAF helicopter in Thailand. It also represented top level concern for USAF involvement in Special Operations in Thailand. Thirdly, it showed interest, at the JCS level, in advancing the use of the USAF helicopter in Southeast Asia.

9/

The first cadre of personnel and equipment arrived at Nakhon Phanom RTAFB in April, 1966, with 6 CH-3Cs on a TDY status from the 20th Helicopter Squadron at Nha Trang AB, Vietnam. The first month of operations proved to be so successful that the U.S. Ambassador commented to the Commander, 7th Air Force, that the quick and prompt action taken by the

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USAF in providing the 6 helicopters for Thai training gave the Thais the necessary morale booster and confidence to proceed in these operations. ^{10/}
The Ambassador also stressed the fact that more helicopters would be needed.

After requests to increase the number of USAF helicopters required to fulfill Thai COIN demands, the Secretary of Defense approved sending 25 helicopters to Thailand on a temporary basis. This was only under a strict agreement that all Thai based helicopters would be withdrawn from the country by 31 January 1967. The additional helicopters were deployed on a gradual basis during the summer months of 1966 to help the Thais develop a quick airlift response to insurgent movements in Northeast Thailand. ^{11/}

Ten of the thirteen CH-3C helicopters from the Pony Express Squadron at Udorn and 14 Huey (UH-1F) helicopters were assigned on a temporary basis. By September 1966, the helicopter support had accomplished much more than was expected when "Lucky Tiger" began operations. During June, July and August, the USAF had been able to provide the RTAF with the tools, techniques, and the motivation to eventually reach their own operational ^{12/} level.

At that time the Deputy Commander, 7/13AF at Udorn, informed the Commander, 7th Air Force, of the success of the USAF helicopter and the need for additional aircraft to continue the mission. The request was not fulfilled. The reasons for this were based upon availability of helicopters in Southeast Asia at that time but more important, the basic fact that the USAF position in Thailand still remained a sensitive one. The Defense

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Department had spelled out firm guidelines that the U.S. would serve solely in an advisory capacity in Thailand and would not become actively involved in any combat operations. Therefore, any sudden increase in aircraft or personnel would touch off an already sensitive fuse.

The 13AF historical account of the USAF buildup in Thailand during 1966 was full of examples of news leaks which, when picked up by the American Press Corps, proved to be highly embarrassing. USAF, in deploying its helicopters to Thailand, even though very successfully, did have its problems. Among these were the basic attitude of the Thai people towards the military, a subject which was commented on earlier in this report. Their view of airpower was not one of high priority, and looked upon air travel as something that was reserved solely for VIPs.

The withdrawal of the USAF helicopters from Thailand by 31 January 1967 was an issue of serious consideration for military leaders in Southeast Asia. First, it was obvious that at the Ambassadorial level, it was not considered important enough to attempt to push the issue of the retention of the USAF Thai based helicopters up through the State Department. Second, there existed at top levels, CINCPAC for one, a justifiable concern for "doing too much" for the RTAF and not allowing them to "pick up the ball" themselves. Third, it was necessary to make an appraisal of the total success and effectiveness of the Thai-based helicopters in Special Operations. Because of the terrain factor, the helicopter proved to be the best vehicle for the job. As an example, in August 1966, 10 helicopters (8 UH-1F and 2 CH-3C) airlifted 350 Thai Police and Army troops from Udorn

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and Sakon Nakhon to positions surrounding an insurgent area. The significance was that the helicopter was used to supply and relocate government forces--a forerunner of the CAS and MACSOG operations which will be discussed in this report.

USAF helicopters provided a means by which the Thais were able to build a defense against insurgent actions by the Communist forces throughout Thailand. Thailand remained in 1966 as it still does today, a vital nation for the defense of a free Asia.

In commenting on COIN operations in Thailand in 1966, the U.S. Ambassador stated that the use of the USAF helicopter stimulated among the Thai people an activity which could have been achieved in no other 18/ manner.

"The work of these helicopters has shown dramatically to the Thais not only the need but the practicality of unifying this region. These 25 helicopters have had a catalytic effect on the Thai counterinsurgency effort which could not have been produced by several years of vastly more expensive and more diffused direct assistance. The results are evident everywhere--in getting governors out in their provinces; accelerating the fielding of medical and information teams, and stimulating further deployments of Thai security forces into critical areas..."

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CHAPTER IV

USAF SPECIAL OPERATIONS: PART II

The Green Hornets

Special Operations involving USAF helicopters came under the control of the 20th Helicopter Squadron. As of 1 August 1968, this Squadron assumed the title 20th Special Operations Squadron, by direction of Hq PACAF. Headquartered at Nha Trang AB on the coast of SVN, the 20th HS was under operational control of the 14th Air Commando Wing, as of 1 August 1968, the 14th Special Operations Wing. The complex mission of the 20th HS gave it operational range throughout Vietnam and Thailand. (Fig. 8.)

Flights A, B, and C of the 20th HS were located at Udorn RTAFB in Northern Thailand, while flights D, E, F, and G were located at Nha Trang AB. G Flight, at the time of this report, was preparing to move to Udorn with four UH-1F helicopters and be operational there by 1 August 1968. The 20th HS utilized two Forward Operating Locations (FOLs), one located at Tan Son Nhut Air Base, and the other at Ban Me Thuot.

The primary mission of the 20th HS was to provide a rotary wing air-lift capability to support the Special Operations of the 14th ACW. Other missions included the conduct and control of USAF combat support activities in Special Operations and the support of USAF and U.S. sponsored activities, such as the Special Forces Recondo Operations and activities of other ^{1/} Allied Nations. Because much of the work of the 20th HS was highly classified, with both political and military overtones, this

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particular chapter is presented within the necessary security boundaries.

The 20th HS was activated in October 1965 by the Department of the Air Force. Originally assigned to the 2nd Air Division at Saigon's Tan Son Nhut Air Base, the 20th HS came to Vietnam from Eglin AFB, Florida. Once at Tan Son Nhut, the 20th fell under operational control of the 6250th Combat Support Group.^{2/} The original group from Eglin consisted of 8 CH-3C helicopters and 20 combat crews, each crew consisting of a pilot, co-pilot, and crew chief. When the 20th HS was reactivated, its first mission objective was to provide support for personnel and cargo airlift, as well as assistance in Search and Rescue Operations. This mission changed as the nature of the war took on new perspectives in the years following 1965. Two months after arriving in Vietnam, the crews of the 20th HS were sent TDY: six to Cam Ranh Bay, five to DaNang, while nine remained at Tan Son Nhut.^{3/}

The role of the USAF helicopter in Southeast Asia changed during 1966 as Special Operations increased in Thailand. It shifted from the original mission of the 20th HS, as mentioned above, to a mission of a highly sensitive nature. The new mission brought some of the helicopters of the 20th HS to Nakhon Phnom RTAFB to support Thai COIN operations in "Lucky Tiger" activities. These UH-1F helicopters were in Thailand on a temporary basis, and were transferred back to Nha Trang in January 1967, as directed by CSAF and CINCPACAF.^{4/}

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ORGANIZATION OF THE 20TH HELICOPTER SQUADRON

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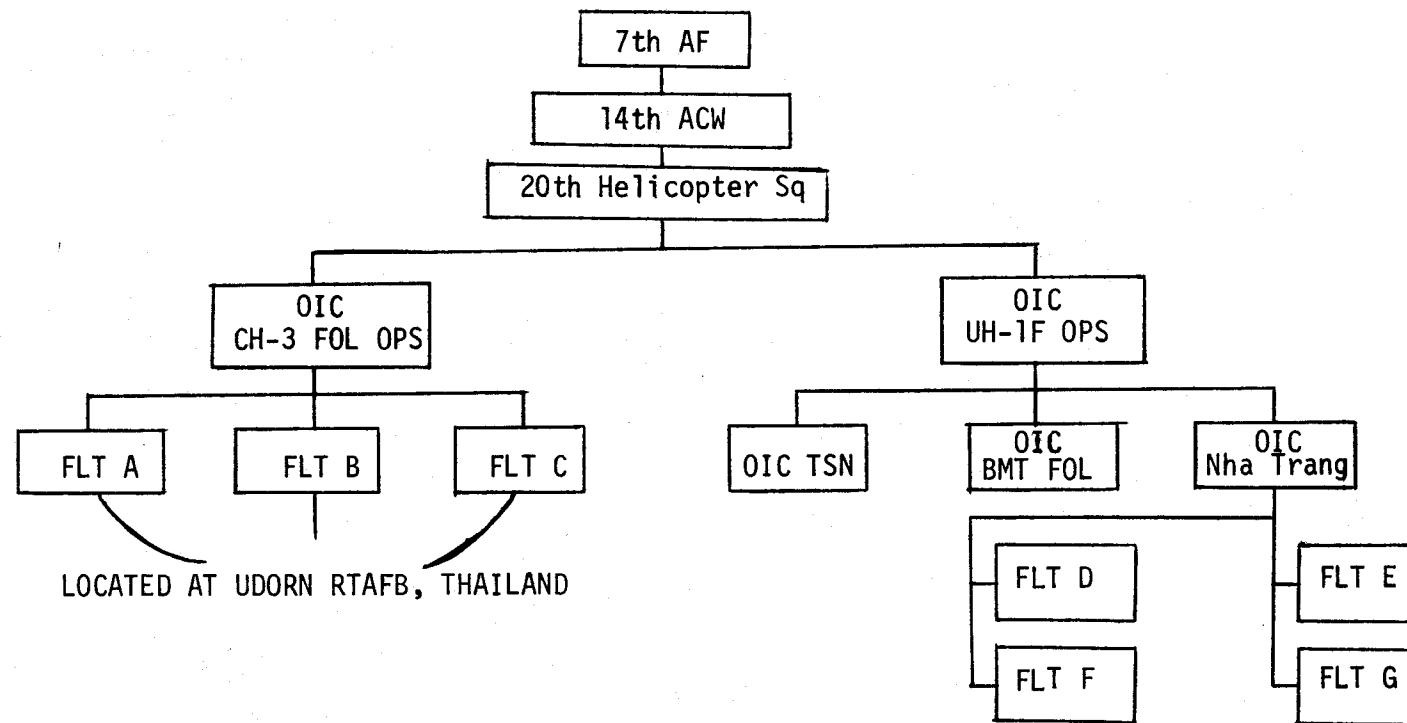
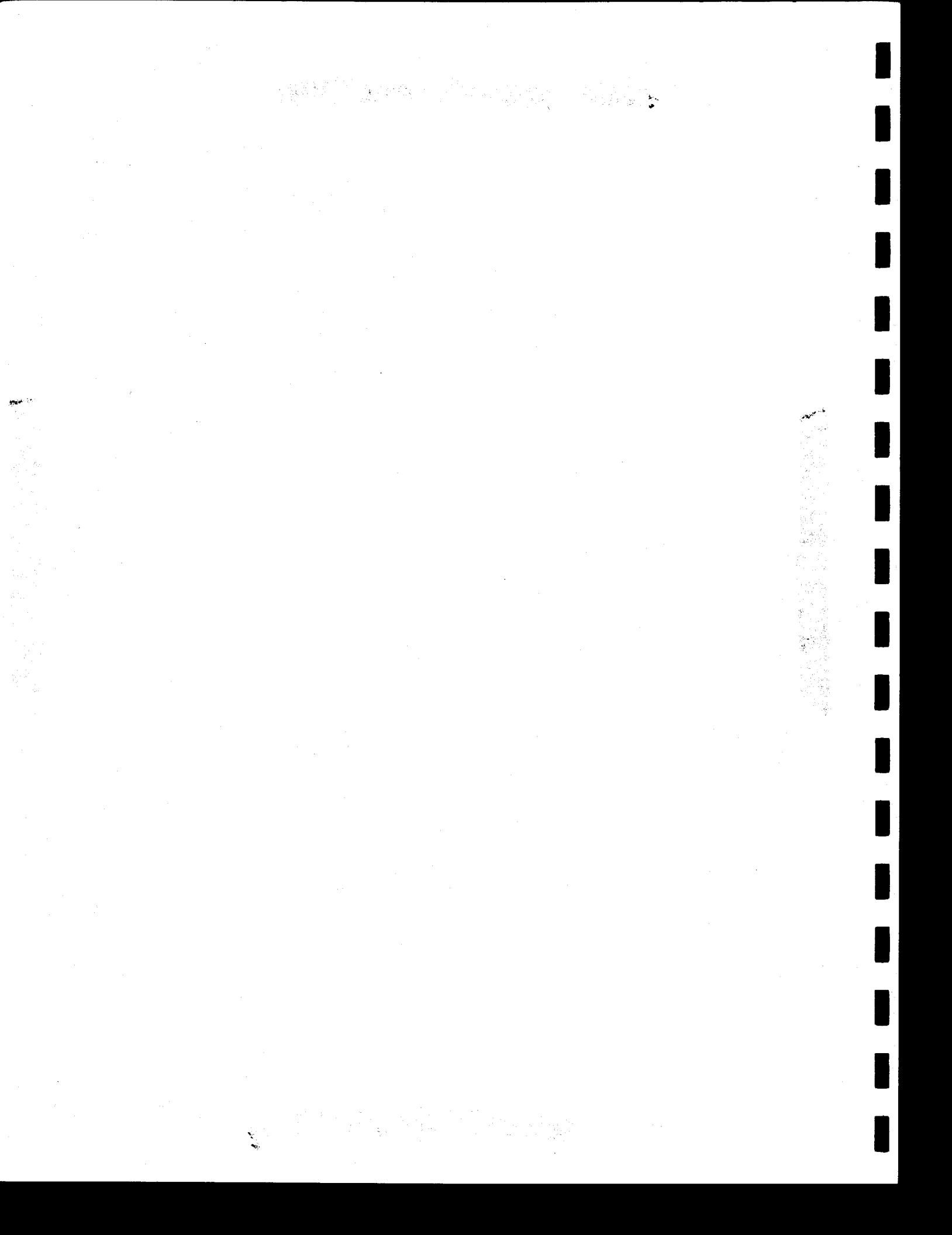


FIGURE 8

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Once the helicopters were relocated at Nha Trang AB, in February 1967, they lost their original mission. It was during February 1967, that the 20th HS picked up a new mission--a mission which was highly classified. MACV requested that the 20th HS utilize its Armed Huey Gunship helicopters to test and evaluate a new weapons system. The test program was a success. On 19 February 1967, 4 UH-1F helicopters armed with 7.62 miniguns and 2.75 rocket launchers, performed the first MACSOG ^{5/} mission. This was the first armed USAF helicopter operation in USAF history, and interest in this activity proved to be very high. USAF officials were in favor of continued use of its armed helicopters for SOG missions. Evidence for growing USAF interest in helicopter support for Special Operations was present in a message from CSAF to CINCPACAF in January ^{6/} 1967.

"The value of and increasing need for a vertical lift capability in the Special Air Warfare (SAW) forces has been clearly demonstrated. Future requirements for this capability, both in support of joint and combined UW operations and in training and supporting the counterinsurgency elements of indigenous air forces, demand an even greater USAF capability. Therefore, a long range objective of the Air Force is to achieve a significant expansion in our SAW vertical lift capabilities..."

"While in Thailand, the helicopters from both the 606th ACS and 20th Squadron achieved significant results. These results have been recognized at all levels including Ambassadors Martin and Sullivan, and CINCPAC. It is essential that the prestige and image of these forces continue to be maintained in Vietnam. To this end, wherever possible, these forces should be employed in SAW type missions and not become unnecessarily absorbed in non-SAW support activities which

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are competitive with U.S. Army helicopters present in extensive numbers. It is recognized that CINCPAC has in part justified the retention of these aircraft in SEA based on accomplishing or augmenting a variety of support missions. However, in light of increasing civic action and cross-border UW requirements, we believe that these resources can be effectively and principally used in a SAW role. This in turn will lend validity to future actions to expand the SAW helicopter force structure."

A successful job in these missions would give the Air Force some positive evidence and justification for continued airlift support for Special Operations in the future. CINCPACAF commented on this fact in a message to CSAF in February 1967:

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"Ref is CSAF guidance on arming SAW helicopter for use in SAW role and indicated strong initial support for project from COMUSMACV fundamental to successful implementation of program. 7AF has advised close contact with MACV (MACSOG) has so far indicated no resistance to use of AF gunships support SAW operations. 7AF also advised that SAW trained crews are undergoing refresher training on UW in/exfiltration tactics and use of side mounted miniguns installed on four SAW modified UH-1Fs.

"...7AF is pressing with AF MACSOG personnel use these helicopters as gunships. Rationale in urging immediate employment is to cite 'accomplished fact' should opposition to using AF helicopters as gunships SAW operations arise later."

In addition, Air Force leaders were insistent at this time upon getting the Air Force involved in the SOG operations, so that the USAF would retain this helicopter gunship role.

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By July 1967, the 20th Helicopter Squadron had 13 UH-1F helicopters assigned. That same month the 20th Squadron set up an FOL at Kontum to support MACSOG operations out of that area. From this FOL, the Huey gunships and slicks flew 1,593 hours on 2,018 sorties between 1 July and 30 September 1967. During this same period, the UH-1Fs transported more than 63 tons of cargo, 5,314 passengers and expended 389,000 rounds of ammunition.
^{8/} During October 1967, the supply of VNAF helicopters, which were being utilized for out-country operations became critical. The shortage of resources for the VNAF prompted USAF officials to increase helicopter support for highly classified MACSOG missions.

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During the month of November 1967, the following missions were prescribed for the Huey gunship and slick helicopters of the 20th Helicopter Squadron:

- . Unconventional warfare activities
- . Reconnaissance film carrier
- . Base defense
- . Special Operations training
- . Logistical support for USAF units and U.S. sponsored activities, such as DASC ALPHA Special Forces Recondo School Operations
- . Psychological warfare
- . VIP transportation

On 10 December 1967, the 20th Helicopter Squadron moved its FOL from Kontum to Ban Me Thuot. The reasons for this shift was the establishment of a new FOB by MACSOG at Ban Me Thuot. Because Ban Me Thuot was significantly closer to Nha Trang, the main support base, problems of shortage of gunships, and logistic support were simplified.

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Working with the Forward Operating Location, the command structure resembled that shown in Figure 9. With the exception of the FOL located at Tan Son Nhut Air Base in Saigon, the 20th HS carried out all of its in-country and out-country operations from its FOL at Ban Me Thuot. The 20th HS Commander, while located at Nha Trang, exercised operational control over the activities in the field through his Officers-in-Charge at the FOLs. The 20th HS was authorized a total of 21 UH-1F helicopters. The location of the helicopters was as follows:

<u>No. of Helicopters</u>	<u>Location</u>	<u>Type/Use</u>
5	Nha Trang	Used for Training new crews, replacement parts daily run to Ban Me Thuot.
10	Ban Me Thuot	4 Huey gunships 4 Slicks 2 back up aircraft
2	Tan Son Nhut	Used for reconnaissance film carrier, VIP traffic
4	Udorn (1 Aug 68)	Used to support Special Operations for Pony Express flts.

The primary work of the UH-1F helicopters of the 20th HS was to support MACV sponsored and directed SOG activities. They were committed to support the Army units for infil and exfil operations--primarily involved with Long Range Reconnaissance Patrol (LRRP) activities. The patrol teams were based out of the FOL, and were composed of U.S. and indigenous personnel. One advantage of the FOL was that the crews who flew the helicopters to support the SOG operations lived with the patrol teams.

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FOL HELICOPTER OPERATIONS:
COMMAND CHANNELS

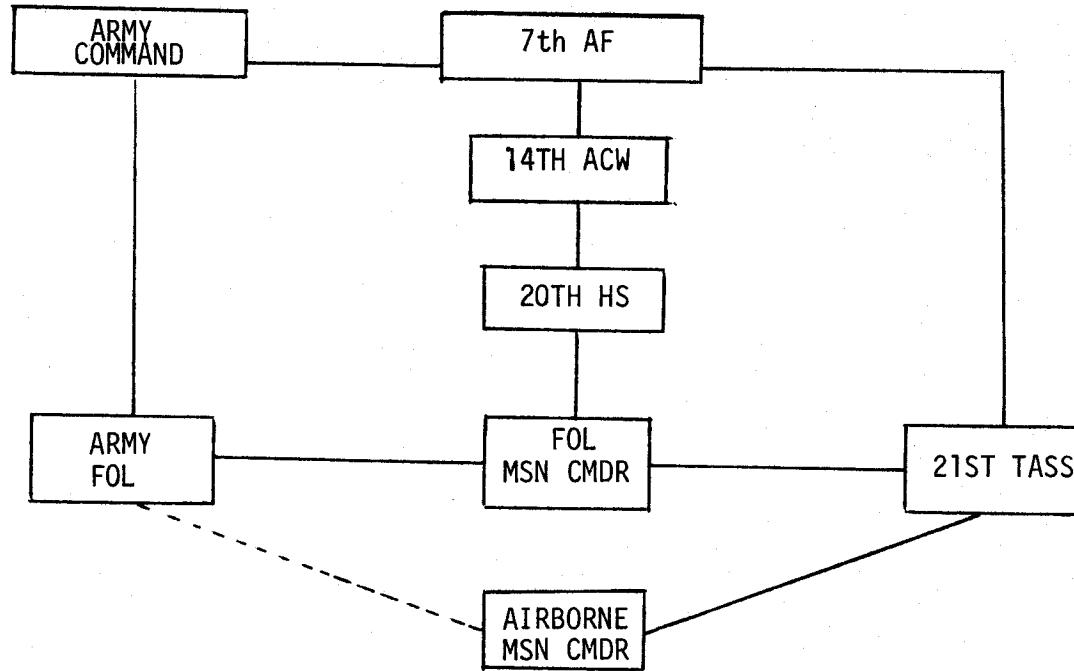


FIGURE 9

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To support the infil and exfil operations, the USAF developed new tactics and special procedures to fulfill these missions. Many of the new tactics evolved from basic combat experience in Southeast Asia, but much was learned by evaluating the Army tactics in carrying out a similar mission. Their tactics and weapons system were found to be incompatible with those of the Air Force--particularly when it came to the actual infil ^{9/} and exfil operation. To illustrate further, the USAF Huey gunships utilized the Pintle Mounted minigun, which provided for a greater degree of flexibility in the defense of the mission crew. The weapons system on the UH-1F was strictly defensive in nature--used only to suppress enemy fire if necessary. It was not viewed as a substitute for tactical air-power.

A normal mission involved seven aircraft: four gunships and three slicks. One slick served as the command and control aircraft, one slick carried the infil team, and the third slick served as the medical recovery vehicle. The four gunships served then as the armed escorts. They were armed with rockets and miniguns, while the slicks were armed only with M-60 machine guns on each side of the helicopter. USAF operational commanders indicated that only two gunships were really needed to support a mission, as long as the other two Hueys were within 20 minutes of the area of operation. USAF liked using these tactics and found them effective ^{10/} in suppressing hostile ground fire. These tactics differed from those employed by the Army. They used the "safety in numbers" theory and set out for one mission with an armada of 12-16 helicopters.

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The infil and exfil aircraft flew in a loose combat formation with the aircraft positioned at different altitudes. With the three slick helicopters in the lead, the two gunships remained on either side of the slicks. The actual infiltration of an LRRP was a well-planned and well-executed operation. The LRRP team, as well as the aircrews, were briefed thoroughly on the pre-selected LZ. The success of this operation was due partially to the fact that the aircrews worked so closely with the LRRP teams and SOG teams they transported.

The UH-1F helicopters operated on infil and exfil missions during daylight hours only. High altitude pilotage charts, 1-100,000 scale, were utilized to determine as much information as possible before the actual mission occurred.

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The procedures for exfil operations were similar. They, too, were quick and undetected. The slicks were launched after the gunships orbited the LZ and insured that there was little or no ground fire. The exfil pilot of the slick orbited the area to survey for himself the conditions below. This enabled him to personally pinpoint the LZ. This was a team effort, and good tactics and coordination were the elements that made these missions successful.

During the Fall of 1967, in a mission involving two Huey gunships, it was the work of the USAF helicopters that saved a U.S. Army unit from being overrun by enemy forces. When the gunships arrived on the scene, the Army unit was cut in half and in spite of a low ceiling and heavy ground fire,

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the USAF gunships made several passes expending all of their rockets and almost all of their ammunitions. This action prevented the Army unit from 11/ being overrun by the enemy forces.

During the TET offensive in January and February 1968, the Green Hornets' operations increased considerably. Frequently, the UH-1F helicopters of the 20th HS were called upon to exfil friendly forces in the Ban Me Thuot area, which was threatened by both VC and NVA forces. On 2 February 1968, the Green Hornet gunships came to the aid of the Army's 155th Helicopter Company, which had been subject to heavy mortar and sniper harassment at Ban Me Thuot. The USAF Hueys "sanitized" the area with rockets and miniguns. Later the same day, along with the 155th Army Helicopters, the Hueys helped the 173rd Airborne Brigade in a combat assault against Hill 491, south of Ban Me Thuot. The USAF slick helicopters 12/ exfiltrated 66 enemy prisoners from this area.

The prime mission of the UH-1F helicopters of the 20th HS during this period was to support a highly classified mission called DANIEL BOONE. Working with the 5th Special Forces Group and Detachment B-50 at Ban Me Thuot, the USAF helicopters conducted reconnaissance patrols, search and destroy operations in the Ban Me Thuot and Duc Lap areas. The Green Hornet forces made more than 13 exfils, picking up 34 men who served as reaction forces, 13 enemy prisoners of war, and 30 wounded troops--absorbing a total of 22 hits.

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As of 15 July 1968, the loss rate of the 20th Helicopter Squadron was small. The squadron lost only one UH-1F in performing missions for MACSOG infil/exfil operations. The low loss rate may be attributed to excellent crew training, efficient and thorough intelligence briefings and flexibility. All MACSOG missions involving the UH-1F helicopters operated out of Ban Me Thuot, and beyond this, the outer operating areas such as Duc Lap and Ban Don. It must be kept in mind that all MACSOG operations were controlled and directed by MACV, and that 7th Air Force, through the 14th Air Commando Wing and 20th Helicopter Squadron, provided the airlift support.

~~CONFIDENTIAL~~ USAF helicopters supported MACSOG missions in yet another way. They were utilized to support the Joint Personnel Recovery Center (JPRC), the MACSOG section which monitored the recovery of all U.S. and Allied personnel from hostile or remote areas of Laos, North or South Vietnam. This mission was not associated with the usual Search and Rescue missions. The helicopter had two specific missions here: (1) to infiltrate the Safe Area Activation Team (SAAT) to search for downed personnel and eventually exfiltrate the personnel, and (2) to airlift friendly forces into recovery areas where armed conflict with enemy ground forces is expected and eventually exfiltrate the friendly troops. The CH-3 helicopter was best suited for the JPRC role because of its radius of operation and capability to carry cargo and personnel.

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Up to this point, mention has only been made of that portion of the 20th Helicopter Squadron's mission that operated out of Vietnam. The 20th Squadron, even though headquartered at Nha Trang AB, had three flights that operated out of Udorn RTAFB.

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CHAPTER V

USAF SPECIAL OPERATIONS: PART III

The Pony Express

The three flights of the 20th HS located at Udorn RTAFB had a unique mission, and a unique title which appropriately coincided with that mission.

The Pony Express flights of the 20th HS initially had an authorization for 14 CH-3C aircraft. Eight of these were physically deployed to Udorn, while four remained at Tan Son Nhut until September 1967.^{1/} Four helicopters were transferred to the 21st HS at Nakhon Phanom RTAFB, leaving the flights at Udorn with a total of ten helicopters authorized. Keeping in mind the sensitive relationship which existed with the American military forces in Thailand, the personnel and equipment of flights A, B and C of the 20th HS were TDY to Udorn from Nha Trang AB until May 1968, when PCS status was approved.

The mission of the Pony Express flights of the 20th HS at Udorn was four-fold: (1) TACAN site support, (2) support for CAS operations, (3) support for SOG missions, and (4) general support for USAF and U.S. controlled operations. Originally, the Pony Express flights had the additional mission of providing backup support for SAR missions. In September 1967, in support of the Jolly Green crews at Udorn (40th ARRS), the Pony Express helicopters flew 21 hours, 45 minutes in 21 sorties. Because HH-53 helicopters arrived at Udorn in September 1967, and the shift of some rescue helicopters to Nakhon Phanom RTAFB, the Ponys were relieved of the SAR support role in September 1967.

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TACAN site support was the prime responsibility of the Pony Express flights. Working primarily in Laos to support the maintenance and construction of U.S. TACAN sites, the USAF helicopters made another contribution to the role of airpower in Southeast Asia. As early as 1966, after the USAF helicopters arrived in Thailand, they were used to install and support Radar and Communication sites in Vietnam.

The first recorded use of the USAF helicopter for this type of work occurred in January 1966. USAF was called upon to assist in laying a coaxial cable from Monkey Mountain, near Da Nang AB, to a summit where a GCI Radar Site was being installed. The CH-3 helicopter was used to airlift generator sets weighing more than 5,000 pounds. In October 1966, the CH-3 assisted in the construction of a Radar Site at Hon Tre Island, near Nha Trang AB, airlifting radar and construction equipment. Material and equipment weighing 102,000 pounds were transported by the CH-3 helicopter in November 1967 to build a similar radar site at Con Son Island, 45 miles off the coast of SVN.
^{2/}

In July 1967, the Pony Express crews at Udorn accepted a high priority mission to provide support for the installation of radar sites in Laos. This task also entailed providing an airlift capability to first build, and then support TACAN sites in Laos. The USAF helicopters of the Pony Express flights at Udorn transported communication facilities and supplies to several remote TACAN sites which were necessary for the control of air operations in Southeast Asia.

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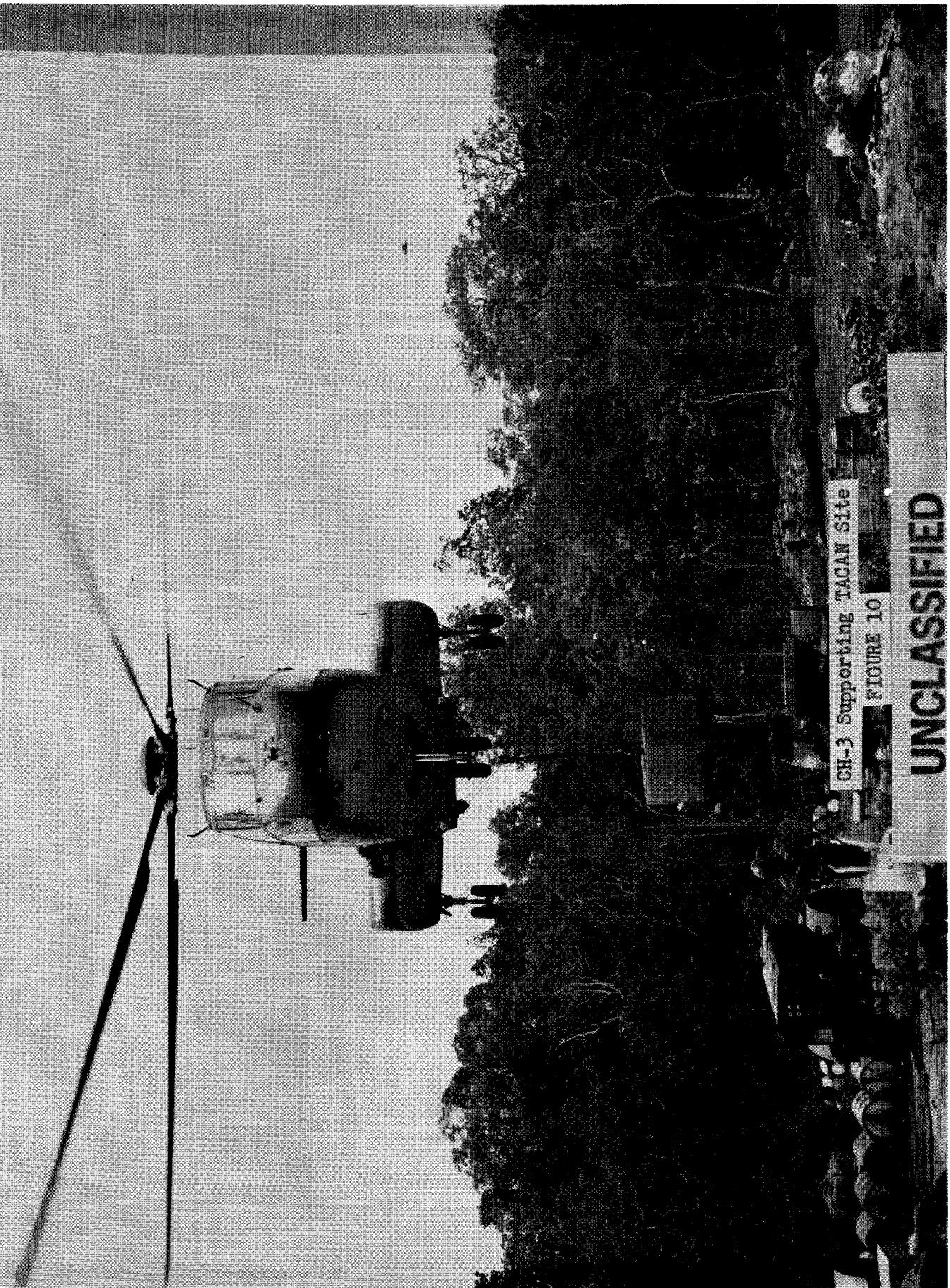
From July 1967 to July 1968, the CH-3 helicopters provided the airlift to build and support TACAN sites in the RVN, Laos and Thailand. Site 99 in Thailand was installed solely through the support of the USAF helicopters.
3/ Weekly airlift during the latter months of 1967 for TACAN site support averaged 6500 pounds, including construction materials, food, and passengers.

Various pieces of communication equipment were emplaced by the CH-3 helicopters from Udorn and by the UH-1Fs from Nha Trang during the period December 1966 to June 1968. In Vietnam, temporary relay sites were installed and then removed by USAF UH-1F helicopters. These sites were used to support the Special Forces personnel of the LRRPs, which in turn were supported by the UH-1Fs from Nha Trang. In Thailand, the Pony Express helicopters provided significant airlift to support the U.S. AID overseas mission by carrying equipment to install VHF radios in isolated villages in Northern Thailand to warn against terrorist activities.

On Christmas day 1967, hostile forces overran the TACAN site at Muang Phalane, Laos. This required a quick reaction on the part of the helicopter crews from the Pony Express operation at Udorn. Because this equipment was vital to support Task Force Alpha at Nakhon Phanom RTAFB, the CH-3 helicopters airlifted navigational equipment and electrical material to set up a new TACAN site at Mukdahan, Thailand, across the Mekong River from Savannakhet, Laos.

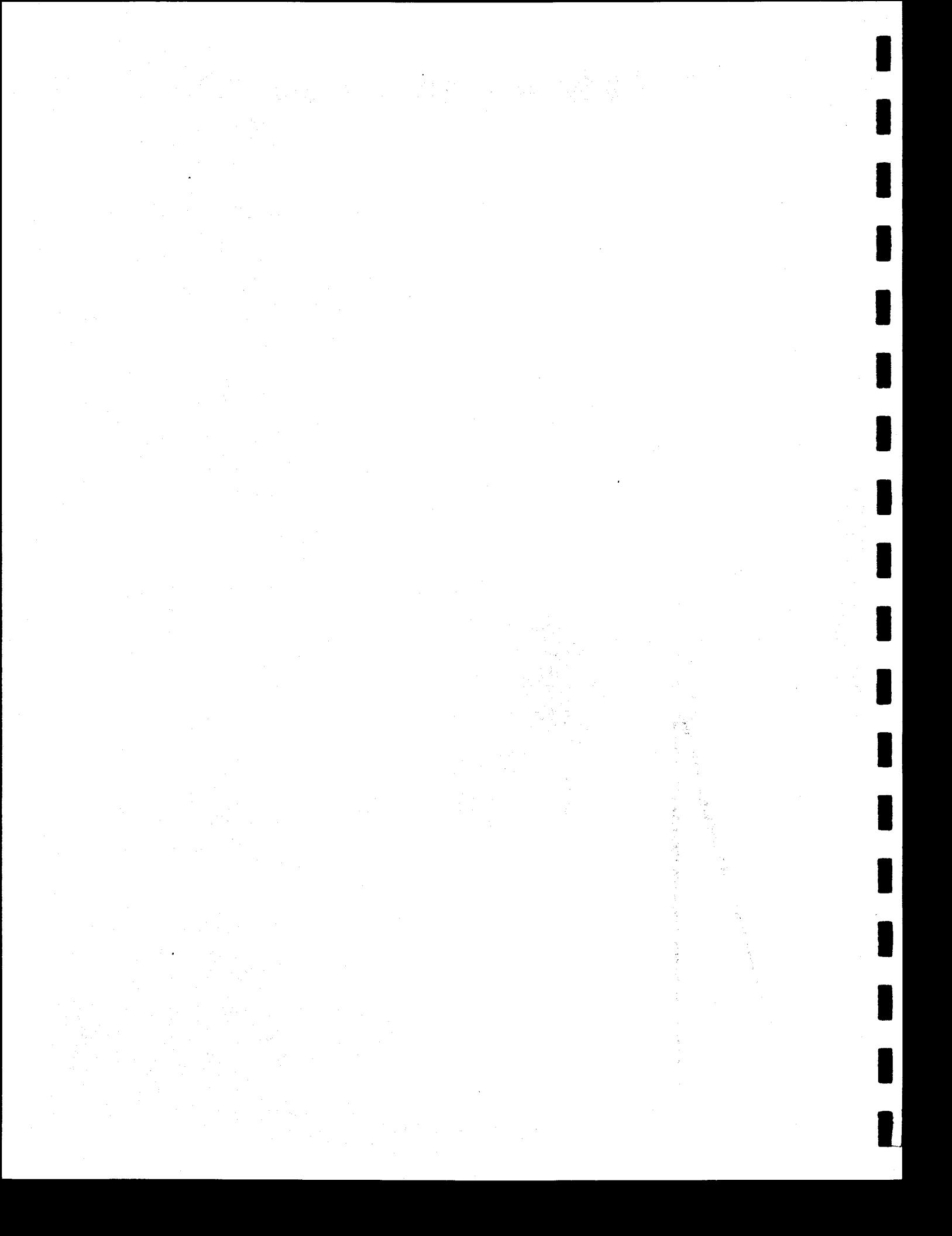
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CH-3 Supporting TACAN Site
FIGURE 10

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During 1967, in the Barrel Roll area of Northern Laos, the USAF helicopter participated in air operations that stood out as being unique in military history. For the first time, the U.S. furnished full-fledged air support both in the area of logistics and strike forces to a guerrilla army. At this time, the fighting by friendly Laotian forces against the forces of Pathet Lao and North Vietnamese Army was carried on by small bands of guerrilla fighters. These guerrilla fighters, often hill tribesmen of North and Central Laos, were organized, equipped, and trained with
4/
U.S. assistance.

By contributing full air support with the CH-3 helicopter, the teams operated from areas which they otherwise could not have entered because of the terrain and unimproved landing areas. The helicopter was capable of supplying the areas with equipment, as well as the airlift to exit the area. These operations represented the first time in 1966 that the Pathet Lao forces were not able to wage a successful campaign against the friendly
5/
forces in Laos.

As an example of the way the USAF helicopter was utilized to support CAS operations, the following missions are cited. On 29 December 1967, two CH-3 helicopters participated in an assault against unfriendly forces. The Pony Express helicopters had to infil and exfil indigenous personnel from a specified area of operation. The helicopters drew several hits amidst heavy small arms fire as they airlifted more than 200 combat troops in and out of the target area. On the last exfil mission, the LZ came under heavy automatic weapons fire. The first helicopter took several hits

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but managed to exfil safely 29 members of the team, with both the pilot and the copilot providing cover fire from the door of the aircraft. The second helicopter, after exfiltrating a full load, returned to pick up six remaining personnel. Amidst heavy ground fire, the personnel were airlifted away from the hostile area with no casualties.

Another instance on 5 January 1968 reflects the versatility of the USAF helicopter in supporting the CAS Roadwatch Team efforts. On that day, a Roadwatch Team of indigenous personnel was infiltrated into an area of North Vietnam to gather information on road traffic. Five days later, the Pony Express helicopters returned to exfil the team, using the cable hoist to airlift the members of the team out of a hostile area.

~~CONFIDENTIAL~~ In his end of tour report, dated 30 June 1968, 7/13AF Commander, M/Gen William C. Lindley, Jr., cited the resources of the Pony Express helicopters as being the significant factor in making the operations of the CAS Roadwatch Teams a success. He stated that comments from field commanders clearly illustrated that without the infil/exfil capability of the helicopter, and without the information gathered by the CAS Teams, the air strikes in 1967 would not have been as effective as they were.

These operations involved a great amount of coordination, not only on the military level, but on the diplomatic level as well. The CAS operations were very favorably supported by the U.S. Ambassador to Laos, and he, in turn, had the backing of the Chief of Staff, USAF. In a message sent on 12 May 1968 to the American Embassy in Bangkok, COMUSMACV insured that

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coordination had been accomplished, and that USAF helicopters would continue
to provide the necessary support for the CAS Roadwatch Teams in Laos.

Originally, Ambassador Sullivan had asked USAF for as much as 30,000 hours
a year to support CAS operations in Laos. This would have been logically
difficult, but during 1967, the Pony Express helicopters averaged flying
more than 400 hours a month for these missions.

With only 10 CH-3 helicopters on hand, and with each helicopter
programmed to fly 50 hours a month, and with the four-fold mission of these
helicopters at Udorn, support for the CAS operations was adequate. As CAS
Roadwatch operations increased during 1968, the helicopters flew more hours
and hauled more supplies than the monthly averages reflected for the
previous year. In February 1968, to support the CAS operations, the Pony
Express helicopters accounted for 105 hours, 20 minutes, carrying 215,000
pounds of cargo, 243 passengers in 95 sorties. These operations were in
the Steel Tiger area in Laos. In March 1968, on the 13th, 21st, and
24th the CH-3s flew 88 sorties, hauling 1,111 passengers and 23,350 pounds
of cargo as part of an evacuation program of more than 5,000 personnel
from Laos. This mission was accomplished in cooperation with Air America.

The Pony Express helicopters also worked to provide airlift support
for the MACSOG operations. These operations were similar to those which
operated and staged out of Nha Trang AB, Vietnam. The SOG team operations,
which utilized Thailand-based helicopters, coordinated all operations with
Hq 7/13AF through the SOG liaison officer. Requests for helicopter support

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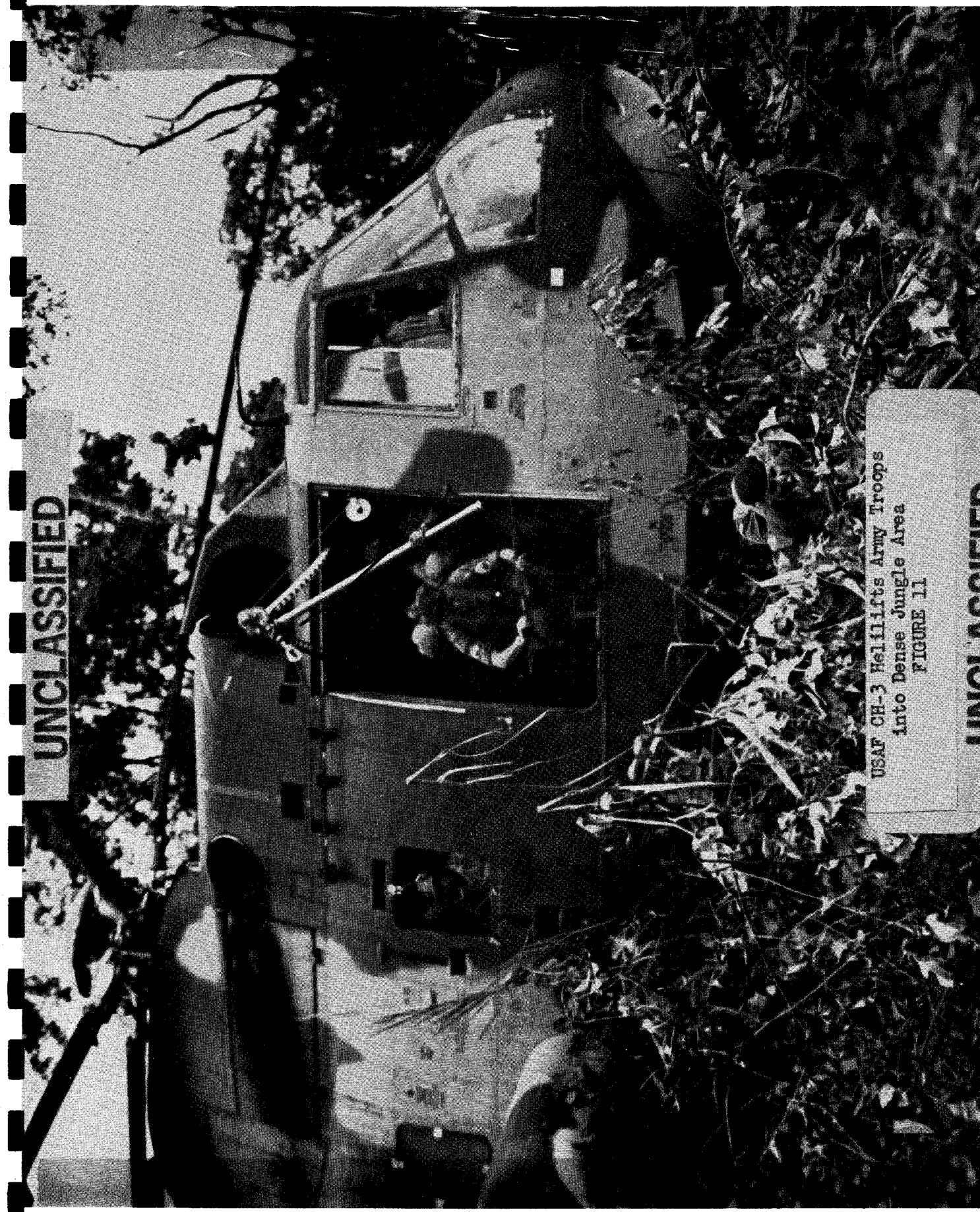
for SOG missions went through 7AF TACC and Hq 7/13AF, while 7AF actually
13/
fragged the missions for MACV.

The CH-3 helicopters at Udorn also provided airlift support for USAF and U.S. sponsored activities. These included Special Forces training and combined efforts with the U.S. Army in training the RTAF in civic action operations in Thailand. The helicopters also supported operations for Combat Skyspot. One additional job that was tasked to the Pony Express helicopters was to carry out reconnaissance flights for the Royal Thai Government. In a message from COMUSMACV to Deputy Commander, 7/13AF, on 26 April 1968, the subject of the USAF providing two CH-3s for daily reconnaissance work was discussed. The area of concern was the routes along the Mekong from Vic Nong Khai east to Vic Bung Kai and west to Vic Chang Khan.
14/

Because of the sensitive nature of helicopter operations from Thailand, operational and command control over the 20th HS was a bit complex. The 7AF TACC maintained operational control over all 20th HS CH-3 and UH-1F aircraft through (1) Hq 7/13AF for all aircraft operating out of Thailand, and (2) Hq 14th ACW for all aircraft operating from Vietnam. For all CH-3 and UH-1F missions directed by COMUSMACV and higher headquarters, 7/13AF TACC exercised operational control for all aircraft based in Thailand while 14th ACW controlled aircraft operations from Vietnam as directed by 7AF
15/
TACC. Command Control worked in a similar manner. The Commander, 7AF, exercised ultimate control over CH-3 and UH-1F helicopters through his respective commanders at Hq 7/13AF and Hq 14th ACW.

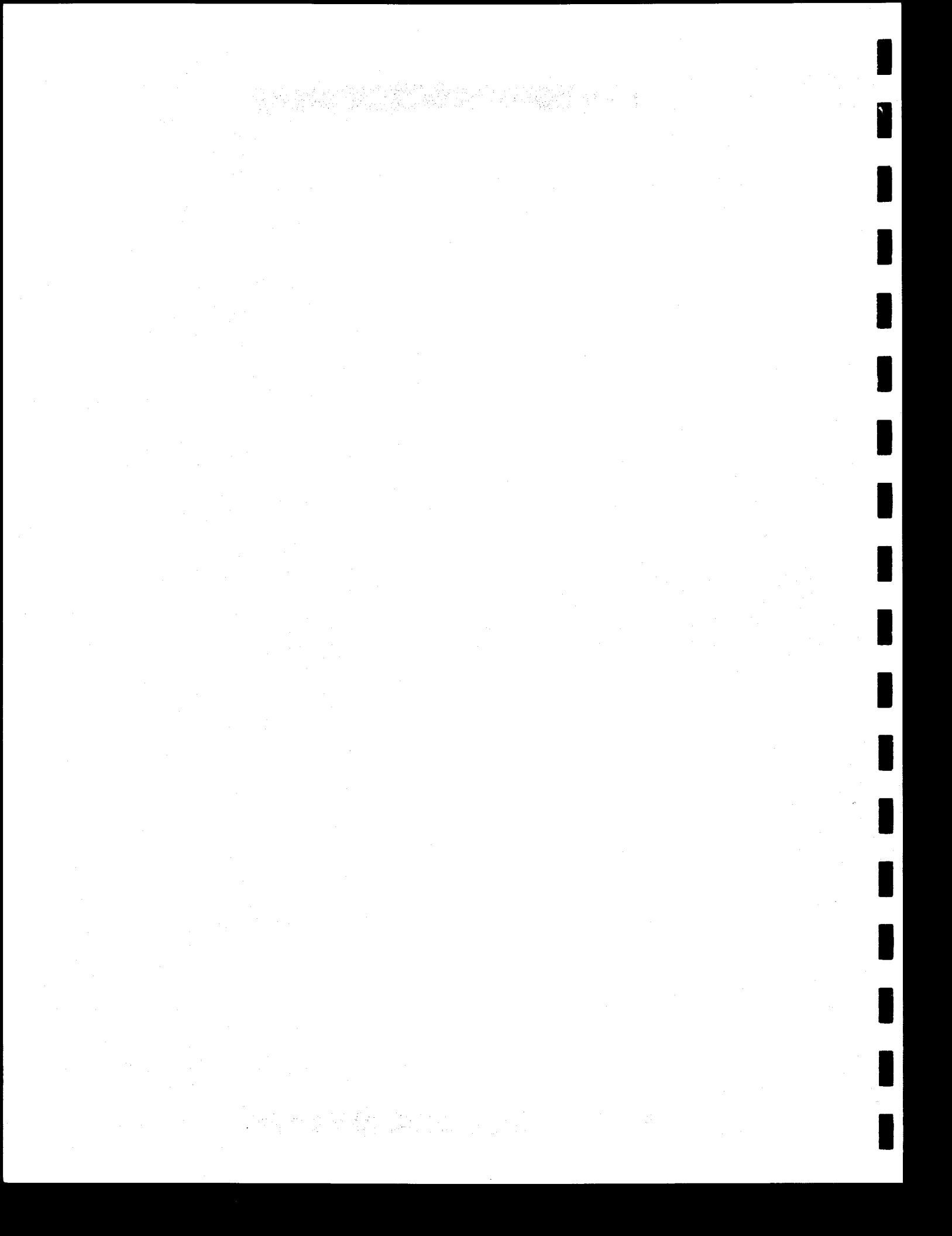
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USAF CH-3 Helilifts Army Troops
into Dense Jungle Area
FIGURE 11

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The reaction at military and State Department levels was very favorable concerning Air Force helicopter operations from Thailand. In a message from 7th Air Force to Deputy Commander, 7/13AF, on 17 April 1968, the priority of missions and the use of USAF helicopters was discussed. Retention of USAF helicopters in Thailand was justified by the fact that CAS and MACSOG operations depended upon the assets of the Pony Express ^{16/} helicopters to perform their mission.

Further evidence for the continuation of USAF helicopter operations in and out of Thailand existed in the fact that the Royal Thai Government depended and relied upon U.S. and Allied aid in fighting a COIN war in Thailand. The economic and industrial capacity of Thailand was not strong enough to enable the RTAF to develop a capable tactical and strategic air arm. This fact alone justified the position of the USAF in Thailand. In a message to the Deputy Commander, 7/13AF, the 7AF Commander cited that the success of the CAS and SOG operations are justification alone for the retention of USAF helicopters in Thailand. ^{17/}

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CHAPTER VI

"THE DUST DEVILS"

One of the most unique, but highly classified roles that the Air Force has given to its helicopters in Southeast Asia may be found with the 21st Helicopter Squadron. Located at Nakhon Phanom Royal Thai Air Force Base in Northeastern Thailand, 10 miles from the Laotian border, the 21st has a mission which stands alone as being unique in concept and one of the most valuable in SEA. Originally activated at Shaw AFB, South Carolina, in July 1967, the 21st Helicopter Squadron moved to Nakhon Phanom RTAFB in November 1967 with the initial cadre of aircraft and personnel.

When the squadron was established at Nakhon Phanom in 1967, it had as its prime mission the air emplacement of an anti-infiltration system in Laos. It worked directly with and in support of "Project IGLOO WHITE" of Task Force Alpha. Task Force Alpha was organized in the Fall of 1967 under command control of 7th Air Force at Tan Son Nhut Air Base. Brig. Gen. William P. McBride assumed command of Task Force Alpha in October 1967 and became responsible for the operation of this complex and important organization.

The original concept of developing an electronic barrier across Laos, the prime area of enemy infiltration into South Vietnam, began with a Defense Communications Planning Group (DCPG) plan in October 1966. After reviewing intelligence reports which clearly outlined the routes of enemy infiltration into SVN through Laos, the DCPG established firm objectives

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and guidelines for the anti-infiltration system of Task Force Alpha. The systems would detect enemy troop movements, identify areas of supply efforts, and, most important, they would serve as the major factor in reducing the total fighting effort of the enemy. Accordingly, the 7AF Operations Order (515-68) designated specific tasks and forces for the MUSCLE SHOALS (re-designated IGLOO WHITE) program and 7AF officially conceived the system as basically an intelligence gathering device, not as a control agency to direct airstrikes on specific targets.

1/

Working in direct support of Task Force Alpha, the 21st Helicopter Squadron provided the necessary airlift capability which was needed to carry out the programs of Operation IGLOO WHITE. In looking at the command structure, the 21st Helicopter Squadron came under operational control of the 56th ACW, the parent organization at Nakhon Phanom. However, the 56th ACW and Task Force Alpha were on the same line of command, working directly for the Commander, 7AF. Accordingly, even though the 21st HS and the 1st ACS were under the 56th ACW, their prime mission was to support Task Force Alpha.

The prime mission of Task Force Alpha was to detect, hinder, and penalize enemy infiltration into Laos. Task Force Alpha utilized air-emplaced acoustic and seismic sensor systems. The sensor system was emplaced in the ground from an aircraft across a possible path of enemy infiltration, an area which was selected previously by TFA. Once emplaced, either above or below the earth's surface, the sensor system picked up

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signals of enemy infiltration and relayed this information via its self-contained transmitter to an airborne receiver, the EC-121, based out of Korat RTAFB. The airstrikes, if any, which followed, responded to the information received through the sensor systems and the airborne receiver.

The employment of the sensor detection system was divided into two major categories: anti-personnel interdiction, nicknamed Dump Truck, and anti-vehicular interdiction, nicknamed Mud River.^{2/} Both categories, in turn, utilized acoustic and seismic sensor systems. An acoustic sensor system was a battery powered detector and transmitted any airborne sound. It used primarily the Acoubuoy, an air-emplaced listening device which picked up sounds just above the ambient noise level. These sounds may be either those from people or moving vehicles. Once a sound had been detected, the Acoubuoy sent the information to the airborne receiver through the RF transmitter. A seismic sensor system is a device which was emplaced below the earth's surface and detects vibrations of the earth which were created by moving vehicles or heavy foot traffic. An example of seismic system would be the Air Deliverable Seismic Intrusion Device (ADSID).

Operation MUD RIVER was designed primarily to detect the movement of enemy vehicles into Laos--usually accomplished under the protective cover of darkness and thick jungle growth. Operation DUMP TRUCK picked up the sounds of troop movements and other vehicles along the suspected paths of enemy movements in Laos.

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To accomplish this complex and technical mission, Task Force Alpha called upon a unique combination of aircraft to work as a team to set up this electrical barrier across Laos. The A-1E, the F-4, and the CH-3 helicopter were modified for this particular mission. The CH-3 and the F-4 were used to emplace the sensors while the A-1E provided the necessary cover, escort, and fire suppression capability. The operation took on a complex appearance--for one glance at the aircraft utilized revealed a co-ordinated effort among several operational units in Southeast Asia. The CH-3 helicopters, as well as the A-1Es, belonged to the 56th ACW at NKP, while the F-4Ds belonged to the 25th Tactical Fighter Squadron, activated at the 8th Tactical Fighter Wing at Ubon RTAFB during the summer of 1968.
^{3/}

The following resources were available to Task Force Alpha to begin
^{4/} the sensor emplacement system on 1 December 1967.

<u>Unit</u>	<u>Number/Type Aircraft</u>	<u>Location</u>
1st Air Commando Squadron	19 A-1E	Nakhon Phanom
21st Helicopter Squadron	12 CH-3E	Nakhon Phanom
23rd Tactical Support Squadron	45 O-2	Nakhon Phanom
553rd Reconnaissance Wing	21 EC-121	Korat
Observation Squadron 67 (USN)	12 OP-2E	Nakohn Phanom

The original target date for starting these sensor emplacement missions was 1 November 1967, but because of the extensive coordination efforts involved, it was not until 1 December 1967 that Task Force Alpha began its
^{5/} work in the MUD RIVER area of Laos. By January 1968, when operations began to build up around Khe Sanh, the sensor system became operational in the DUMP TRUCK section.

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Originally, when the 21st HS was activated at Shaw AFB in the summer of 1967, the squadron had two missions to support Task Force Alpha; (1) to fire Helicopter Delivered Seismic Intrusion Devices (HEOSIDs) and (2) to transport MACSOG teams on infil/exfil missions. The HEOSIDs were to be emplaced in the ground by using a dispenser, mounted in the rear of the helicopter. Once the decision was made to use the USAF CH-3 helicopter to support the mission of Task Force Alpha, several modifications had to be made. The major modification for the USAF helicopter was the armament. The CH-3 was equipped with 2 TAT (Tactical Aircraft Turret)-102 pods, 2 extra tanks, 2 M-60 7.62mm to serve as backup for the TAT-102. It was also equipped with a high speed host, fast fuel dump capability, and the KB-18 camera.

Once the crews and squadron personnel began training in the operational tactics required to perform the mission for Task Force Alpha, it was obvious that the dispenser system of emplacing the HEOSIDs would create several problems. ^{6/} The practice missions, however, were accomplished without any noticeable difficulty. But it was not long after the 21st Squadron arrived in Thailand that problems with the dispenser system forced the mission of the 21st Helicopter Squadron to change considerably. The dispenser was firing the HEOSID at an improper angle, causing the HEOSID to emplace improperly in the ground.

The squadron continued through January 1968 to modify the dispenser method of emplacing the HEOSIDs. Practice in emplacing the HEOSIDs began in late December 1967 at two forward refueling sites, but as these sites

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became insecure, the 21st had to look elsewhere for practice areas. One consideration at the time was to drop the idea of using the CH-3E helicopter, and use the Huey gunship helicopters to emplace the sensors, but this idea was immediately dropped because of the lack of forward refueling sites.^{7/}

The CH-3E helicopter provided the 21st HS with the necessary range and this factor, coupled with the malfunctioning of the dispenser, led ultimately to the technique of physically dropping the ADSIDs from the helicopters at an altitude of 50-150 feet above the ground; not unlike the tactics used by the early aviators in WWI who physically dropped bricks and other objects on the enemy from their aircraft.^{8/} In the second week of January 1968, the military buildup around Khe Sanh became one of highest importance for the MACV forces. On the 19th of January, the 21st HS "Dust Devils" flew their first mission into the Khe Sanh area and dropped the first ADSID on that day. The squadron was called upon to replace a sensor string and relocate another strip for the Khe Sanh area. During the period from 20-23 January, the 21st HS, utilizing three aircraft, flew, without using cover aircraft, missions which emplaced a total of 99 ADSIDs.^{9/} All of these sensors proved to be useable.

The use of the electronic barrier system proved to be a great success on the tactical battlefield of Khe Sanh. The USAF had proved that the helicopter could serve as a functioning and valuable member of the Task Force Alpha team. This mission had previously been accomplished by utilizing the OP-2 aircraft of the US Navy. These aircraft proved to be much too vulnerable to ground fire and the Air Force stepped in with the CH-3E

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helicopter and accepted a new mission for its rotary wing aircraft.

The helicopter was capable of operating very effectively in permissive areas. It had the ability and the flexibility to move in and out of a selected area quickly. If a line of sensors had to be placed along a path of suspected enemy infiltration, that path, most assuredly, would not be a straight one. Whereas, the F-4 had the speed, but it did not have the flexibility to maneuver in and out of the rough and uneven terrain of Northern Laos.

The helicopters of the 21st Squadron at Nakhon Phanom RTAFB operated only in areas where ground fire was known to be light and not very intense. Squadron records at Nakhon Phanom, and a special CHECO study on IGLOO WHITE, both indicated that the CH-3 helicopter proved, without a doubt, to be the most successful means of emplacing the sensors in the DUMP TRUCK area around Khe Sanh in the Spring of 1968.^{10/} During the months of January, February, and March of 1968, the helicopters successfully flew over the target areas of emplacement and the crews dropped both ADSIDs and Acoubuoys manually.^{11/} Although the CH-3 helicopter proved to be valuable in the emplacement of sensor devices it was subject to intense ground fire in areas that were becoming less and less secure. For this reason, more than 75 percent of the sensors which have been emplaced during the last few months have been delivered by the F-4 aircraft.^{12/}

A typical mission for the 21st helicopters began in the mission planning section of Task Force Alpha. Here, the ISC (Intelligence Surveillance

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Center) specified the number, location, and emplacement times of the sensor strings. These facts were determined by extensive studies of intelligence data collected through reconnaissance photographs and information from the MACSOG teams, as well as the CAS Roadwatch teams operating in Laos. What are some of the factors considered in making a decision as to the type sensor and area of emplacement? ~~etc etc~~

The first factor was anticipated enemy resistance, followed by the limitations of the aircraft performance, delivery accuracy, and finally the limitations of the dispensing equipment on the aircraft. After the ISC determined just what sensors were to be emplaced and the exact locations for these sensors, the 21st helicopter operations staff was given this information. During January, February, and March of 1968, when the manual emplacement proved to be so successful, the best combination of aircraft seemed to be the CH-3 helicopter with A-1 aircraft to provide the protective cover and suppressive fire if required. These operations have been and will continue to be carried out in VFR daytime conditions only. 13/

Two CH-3s were used on each mission, one as the primary aircraft for sensor delivery, and the other as the backup support to assist in the mission and to provide rescue cover when necessary. The success of these tactics was proven in January 1968 when one CH-3 was hit by ground fire in the Khe Sanh area and the backup CH-3 successfully rescued the crew of the downed aircraft. 14/ As the primary aircraft descended to the lowest possible altitude over the area of emplacement, the A-1 escort entered the area to

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provide the protective cover, along with the backup CH-3. The altitude ranges for the successful sensor emplacement operations for the CH-3 helicopter were as follows:

<u>DEVICE</u>	<u>ALTITUDE</u>
ADSID	700 Feet
ACOUBUOY	50-200 Feet
SPIKE ACOUBUOY	900-1500 Feet

The helicopter was also expected to take vertical and oblique photographs during the emplacement process. Mechanical problems with the KB-18 cameras on the CH-3 resulted in several failures to insure the proper emplacement process.

An excellent example of how the using agency modified its tactical operations of the CH-3 helicopter occurred in early 1968. When the concept was first developed for the CH-3 to support Task Force Alpha with the emplacement of the electronic sensor systems, the procedures originally outlined were not acceptable to the 21st Helicopter Squadron. It was intended that the helicopter enter the area of emplacement and hover over the area for a set length of time. If this procedure had been followed, the squadron of 12 CH-3 helicopters would probably have been eliminated due to intense ground fire. Instead, when approaching the pre-selected area, the CH-3 did not stop to hover on the target area, but emplaced the sensor system while moving and then exited the area as soon as possible. ^{15/}

The 21st Helicopter Squadron started out with an initial quota of 12 CH-3s, modified to support Task Force Alpha. The squadron as of 15 July

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1968, had 10 CH-3s, suffering only two losses since November 1967. One loss was mentioned earlier, at Khe Sanh, while the cause of the second loss is still undetermined. From photographs and investigation reports, it is presumed that weather conditions caused the CH-3 to crash into a hill top while returning to Nakhon Phanom after a mission in Laos.

By using the helicopter to perform the emplacement of sensors for Task Force Alpha, the USAF added a new job for an aircraft that formerly had been considered solely for use in search and rescue work. The CH-3s of the 21st Helicopter Squadron were the primary means of carrying out this very important mission. The helicopter, by being used to plant sensor devices to detect enemy infiltration routes through Laos, directly supported TACC in controlling the tactical airstrikes in 7AF.

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CHAPTER VII

EFFECTIVENESS OF THE USAF HELICOPTER IN SOUTHEAST ASIA

The USAF helicopter played a significant role in supporting the mission of the 7th Air Force and MACV in Southeast Asia. From the early days of the Air Rescue Service's struggle to establish an efficient Air Rescue unit in Southeast Asia, to the USAF Special Operations of the 20th Helicopter Squadron at Nha Trang AB, Vietnam, the Air Force continued to prove that its helicopters were capable of performing several important jobs.

~~C/NP~~ The USAF helicopter was the only aircraft capable of performing several of the missions conducted by USAF and U.S. sponsored agencies. The Special Operations conducted by the 14th Air Commando Wing at Nha Trang AB would not have been possible if the USAF helicopters had not been utilized. The construction and maintenance of numerous TACAN and Radar/Communication sites in SEA were carried out solely with the airlift supplied by the USAF helicopters. The MACSOG missions, as well as the CAS Roadwatch team operations, provided commanders with invaluable intelligence information needed to plan and conduct operations. The participation and able support that the 20th Helicopter Squadron provided for highly classified missions, "PRAIRIE FIRE" and "DANIEL BOONE", gave the Allied forces the ability to interdict the enemy within his own sanctuary.

Search and Rescue operations were conducted successfully from 1964 through 1968 due to the capable support of the USAF Jolly Green helicopters. USAF helicopters of the 3rd ARRGp have made a total of 690 combat and

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1/
non-combat saves in addition to 1046 other saves, since 1 December 1964.

Statistics providing the loss rates of USAF helicopters in Southeast Asia since December 1964 speak highly of the performance capabilities of the Air Force's rotary wing fleet. Performing missions which, invariably, took them into areas of hostile ground fire, the USAF helicopter possessed a relatively low loss rate. Keeping in mind the type of work involved with the Special Operations and the enemy infested areas the helicopters had to penetrate to rescue a downed crew member, the helicopter contributed significantly to the success of the air war in SEA.
2/

LOSS OF USAF HELICOPTERS AS OF 31 MAY 1968

CH/HH-3	3	over NVN
	6	over Laos
	1	over SVN
	10	
CH/HH-43	1	over NVN
	0	over Laos
	6	over SVN
	7	
UH-1F	0	over NVN
	1	over Laos
	1	over SVN
	2	

3/
The reasons for this successful record may be traced to the following:

- The USAF Air Rescue units are effectively trained and professionally organized to provide the best rescue efforts in SEA.
- The USAF has utilized the flexible characteristics of its helicopters to meet the needs and demands of various missions.

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- The professional dedication of all crew members associated with helicopter operations in SEA.

The success of USAF Special Operations by the 14th Air Commando Wing at Nha Trang AB earned that Wing the Presidential Unit Citation for its work in carrying out its unique mission. The work of the 20th Helicopter Squadron contributed to this overall effort by providing the USAF with its only counterinsurgency helicopter squadron.

Requirements for helicopters in the future are dictated by both the needs of the aircrews and the increasing commitments of the USAF in SEA. The rescue units need a vehicle which is solely a rescue vehicle--not one that is primarily a cargo aircraft, modified for rescue operations. More crew protection is needed for the helicopters currently used in rescue activities. Armor plating should be increased, more power is needed, and a greater hovering capability is desired. These demands were voiced by the men in the field--the people at the working level who are exposed to ^{4/} the everyday operational problems.

An urgent need is the development of a dependable night and all-weather rescue capability. Studies have indicated that because of this deficiency, USAF has failed to retrieve downed aircrews which it might otherwise have recovered. The increase in the number of night strikes and reconnaissance missions during the first half of 1968 place more emphasis on the requirement for establishing an all-weather rescue capability. Jolly Green HH-3E crews are tasked and stand night alert with a required reaction time of 45 minutes; alert status is maintained throughout the

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24-hour day, 7 days a week. JSARC at 3d ARRGp at Tan Son Nhut may, due to the urgency of the mission, utilize non-rescue helicopters/crews to effect a recovery if they are immediately available near the incident area. ^{5/}

One of the greatest needs, expressed by commanders and pilots in SEA, was for a helicopter with a very heavy lift capability. This need was also evidenced by USAF Special Operations requirements in SEA which produced a new trend for Air Force utilization of its rotary-wing aircraft. ^{6/} To more effectively accomplish its mission of supporting TACAN and Radar/Communication sites in Laos, the 20th Helicopter Squadron needs a helicopter with a greater lift capability than it currently has with the CH-3. [Additional requirements for helicopters with increased lift capability arise from operations in support of CAS Roadwatch and MACSOG.] In June 1968, MACV stated that only one Army CH-47 helicopter could be spared to assist the USAF with its operational commitments. ^{7/}

To meet the needs for a heavy lift capability for Air Force helicopters to support USAF Special Operations, OSD approved Air Force requirements for 12 additional CH-53 helicopters to be delivered to operational units by July 1970. In a message from CINCPACAF to 13AF and 7AF reflecting the views of the Chief of Staff, USAF, it was obvious that Air Force did not intend to utilize the resources of the Air Rescue and Recovery Service to support USAF Special Operations in SEA. Further, the Air Force would provide for its own heavy lift capability to preclude the Army from taking this mission of Special Operations support. ^{8/}

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The monthly requirements for the Pony Express helicopters at Udorn
9/
RTAFB were as follows:

<u>HOURS REQUIRED</u>	<u>OPERATION</u>
500 hrs	CAS operations
175 hrs	MAC SOG operations
100 hrs	USAF TACAN site support
<u>775 hrs</u>	

June 1968 utilization of Thailand based helicopters for USAF Special Operations was as follows:

<u>IN-COUNTRY US AGENCY SUPPORT</u>	<u>OUT-COUNTRY CAS SUPPORT</u>	<u>USAF SUPPORT</u>
17 Sorties	258 sorties	232 sorties
87 passengers	555 passengers	612 passengers
5200 pounds of cargo	40,550 pounds of cargo	114,840 lbs cargo
10 hrs, 7 minutes flying time	291 hrs, 7 min flying time	135 hrs, 9 min flying time

C/NK These operations were carried out with 8 CH-3 helicopters and each aircraft
10/
was programmed to fly 50 hours a month. A total of 438 hours was flown
that month to support the total Pony Express commitments. The forces at
Udorn RTAFB will be strengthened on 1 August 1968 when 4 UH-1F helicopters
11/
are transferred from Nha Trang AB. The sensitive nature of this move-
ment of additional personnel and equipment to Thailand demanded the approval
12/
of State Department and Embassy officials. The additional Hueys will
each fly a total of 70 hours a month to meet monthly requirements as stated
above.

The demand for additional heavy lift helicopters for SEA operations,
and the move of four gunship helicopters from Nha Trang to Udorn reflects

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USAF CH-3C Lifts Army Howitzer
into Forward Area
FIGURE 12

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one basic premise: USAF is determined to maintain its helicopter role in SEA. The importance of the USAF helicopter in providing the necessary airlift for Special Operations has been substantially proven.

In spite of objections from USA officials on the increased heavy lift capabilities desired by USAF, records prove that the Army was not willing to provide its heavy lift helicopters on any type of a permanent basis. USAF could not, and should not, depend upon the helicopters of the USA for support of its own missions in SEA.^{13/}

CINCPACAF commented on this problem in a message to Chief of Staff, USAF, in June 1968. He stated in part, that the Air Force should not in any way continue to rely upon the Army to provide airlift support to carry out an Air Force mission. This philosophy alone indicates the Air Force position on the role of the USAF helicopter in SEA.^{14/}

Conclusion

Four years of active combat service in Southeast Asia have resulted in a greater emphasis on the USAF helicopter's versatility in combat operations. From 1964 to 1968, USAF developed new missions which involved its rotary wing fleet in operations of highest priority. The USAF proved that it could use helicopters effectively to perform Special Operations, and, at the same time, advance tactics and equipment for use in Search and Rescue operations.

The USAF helicopter added a new dimension to air operations in SEA which can be expanded, modified, and adapted to meet future combat

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operational requirements. Its use in SEA gave a new perspective to the combined air-ground warfare tactics employed by MACV and 7AF. Being especially adaptable for use over the unique terrain of SEA, the USAF helicopter was successfully used to put the enemy at a disadvantage.

Lessons Learned

Several important observations can be made regarding the USAF helicopter and its use in Southeast Asia and future operations.

- The need for a high performance rescue helicopter is evident--one with more speed, range, and flexibility. The Air Force must develop the equipment and tactics for a night time rescue capability. Rescue crews must be trained for night rescue operations. The rescue craft must be heavily plated with armor to give maximum protection to the aircrews and aircraft systems.
- The armed helicopter is vital to USAF participation in Special Operations. Air Force must continue to develop tactics and maintain its mission in supporting USAF Special and MACV operations. It was proved that armed helicopters can provide the direct close-in fire support for the slick helicopters which transport the personnel involved with Special Operations activities. The vertical lift take-off, provided by the helicopter, enabled Air Force to use its rotary wing aircraft to remain on the ground during infil and exfil operation to provide cover for the troop-carrying helicopter.
- The present USAF personnel policy of manning the helicopter units in Southeast Asia, with pilots who have had varied fixed and rotary wing background, has proved to be effective. Those conversion pilots who come to the operational units with no prior rotary wing experience add valuable contributions to the tactics and maneuvers of the helicopter squadrons. The RTU in CONUS should provide for more advanced and specialized training for the conversion pilots who arrive at the Southeast Asia units with only 70 hours in the helicopter.

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FOOTNOTES

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8. Ibid.
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3. Ibid., p. 140-142.
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5. Ibid., p. 34
6. Ibid., p. 25, 33.
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GLOSSARY

ACS	Air Commando Squadron
ACW	Air Commando Wing
AB	Air Base
ARS	Air Rescue Service
ARRS	Aerospace Rescue and Recovery Squadron
ARRGp	Aerospace Rescue and Recovery Group
ADSID	Air Delivered Seismic Intrusion Device
CHECO	Contemporary Historical Evaluation of Combat Operations
CAS	Controlled American Sources
CINCPAC	Commander-in-Chief, Pacific
CINCPACAF	Commander-in-Chief, Pacific Air Forces
COIN	Counterinsurgency
COMUSMACV	Commander, United States Military Assistance Command, Vietnam
DCPG	Defense Communications Planning Group
DCS	Deputy Chief of Staff
FOL	Forward Operating Location
HELOSID	Helicopter Delivered Seismic Intrusion Device
HS	Helicopter Squadron
ISC	Interdiction Surveillance Center
JCS	Joint Chiefs of Staff
JPRC	Joint Personnel Recovery Center
JSARC	Joint Search and Rescue Center
LBR	Local Base Rescue
LRRP	Long Range Reconnaissance Patrol
LZ	Landing Zone
MACSOG	Military Assistance Command Studies and Observation Group
MACV	Military Assistance Command, Vietnam
NVN	North Vietnam
OL	Operating Location
OSD	Office of the State Department
PJ	Pararescueman

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RTAF Royal Thai Air Force
RTAFB Royal Thai Air Force Base
RVN Republic of Vietnam

SAAT Safe Area Activation Team
SAR Search and Rescue
SOG Studies and Observation Group
SVN South Vietnam

TACC Tactical Air Control Center
TDY Temporary Duty
TFA Task Force Alpha

USMACTHAI United States Military Assistance Command, Thailand
USMACV United States Military Assistance Command, Vietnam
USAIRA United States Air Attaché
USMC United States Marine Corps

VC Viet Cong
VNAF Vietnamese Air Force

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